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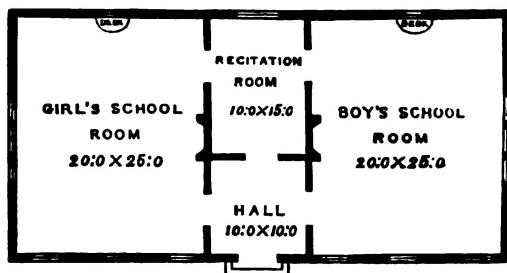
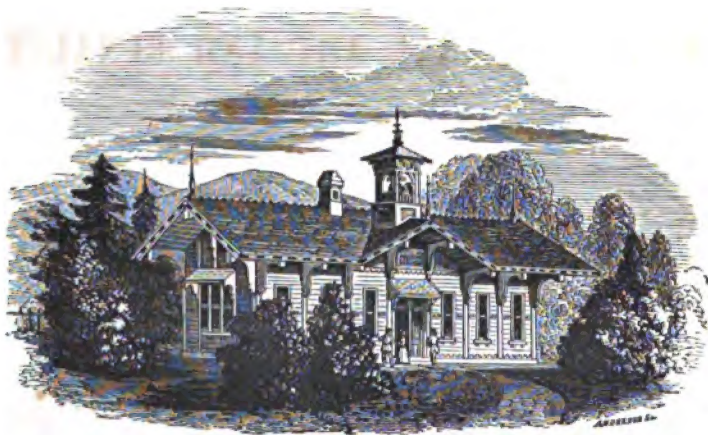
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THE
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AUTHOR OF "LANDSCAPE GARDENING," "DESIGNS FOR COTTAGE RESIDENCES," "FRUITS AND FRUIT TREES
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THE

Horticulturist

and

JOURNAL OF RURAL ART AND RURAL TASTE.

The Home Education of the Rural Districts.

WHILE the great question of Agricultural Schools is continually urged upon our legislatures, and, as yet, continually put off with fair words, let us see if there is not room for great improvement in another way—for the accomplishment of which the farming community need ask no assistance.

Our thoughts are turned to the subject of *home education*. It is, perhaps, the peculiar misfortune of the United States, that the idea of education is always affixed to something *away* from home. The boarding-school, the academy, the college—it is there alone we suppose it possible to educate the young man or the young woman. *Home* is only a place to eat, drink, and sleep. The parents, for the most part, gladly shuffle off the whole duties and responsibilities of training the heart, and the social nature of their children—believing that if the intellect is properly developed in the schools, the whole man is educated. Hence the miserably one-sided and incomplete character of so many even of our most able and talented men—their heads have been educated, but their social nature almost utterly neglected. Awkward manners and a rude address, are not the only evidences that many a clever lawyer, professional man, or merchant, offers to us continually, that his education has been wholly picked up away from home, or that home was never raised to a level calculated to give instruction. A want of taste for all the more genial and kindly topics of conversation, and a want of relish for refined and innocent social pleasures, mark such a man as an ill-balanced or one-sided man in his inner growth and culture. Such a man is often successful at the bar or in trade, but he is uneasy and out of his element in the social circle, because he misunderstands it and despises it. His only idea of society is display, and he loses more than three-fourths of the delights of life by never having been educated to use his best social qualities—the qualities which teach a man how to love his neighbor as himself, and to throw the sunshine of a cultivated understanding and heart upon the little trifling events and enjoyments of every day life.

If this is true of what may be called the wealthier classes of the community, it is, we are sorry to say, still more true of the agricultural class. The agricultural class is continually complimented by the press and public debaters,—nay, it even compliments itself, with being the “bone and sinew of the country”—the “substantial yeomanry”—the followers of the most natural and “noblest occupation,” &c. &c. But the truth is, that in a country like this, knowledge is not only power; it is also influence and position; and the farmers, as a class, are the least educated, and therefore the least powerful, the least influential, the least respected class in the community.

This state of things is all wrong, and we deplore it—but the way to mend it is not by feeding farmers with compliments, but with plain truths. As a natural consequence of belonging to the least powerful and least influential class, the sons and daughters of farmers—we mean the *smartest* sons and daughters—those who might raise up and elevate the condition of the whole class, if they would recognize the dignity and value of their calling, and put their talents into it—are no sooner able to look around and choose for themselves, than they bid good bye to farming. It is too *slow* for the boys, and not *genteel* enough for the girls.

All the education of the schools they go to, has nothing to do with making a farmer of a talented boy, or a farmer's wife of a bright and clever girl—but a great deal to do with unmaking them, by pointing out the superior advantages of merchandise, and the “honorable” professions. At home, it is the same thing. The farmer's son and daughter find less of the agreeable and attractive, and more of the hard and sordid at their fire-side, than in the houses of any other class of equal means. This helps to decide them to leave “dull care” to dull spirits, and choose some field of life which has more attractions, as well as more risks, than their own.

We have stated all this frankly, because we believe it to be a false and bad state of things which cannot last. The farming class of America is not a rich class—but neither is it a poor one—while it is an independent class. It may and should wield the largest influence in the state, and it might and should enjoy the most happiness—the happiness belonging to intelligent minds, peaceful homes, a natural and independent position, and high social and moral virtues. We have said much, already, of the special schools which the farmer should have to teach him agriculture as a practical art, so that he might make it compare in profit, and in the daily application of knowledge which it demands, with any other pursuit. But we have said little or nothing of the farmer's *home education* and social influences—though these perhaps lie at the very root of the whole matter.

We are not ignorant of the powerful influence of *woman*, in any question touching the improvement of our social and home education. In fact it is she who holds all the power in this sphere; it is she, who really but silently, directs, controls, leads and governs the whole social machine—whether among farmers or others, in this country. To the women of the rural districts—the more intelligent and sensible of the farmer's wives and daughters, we appeal then, for a better understanding and a more correct appreciation of their true position. If they will but study to raise the character of the farmer's social life, the whole matter is accomplished. But this must be done truthfully

and earnestly, and with a profound faith in the true nobility and dignity of the farmer's calling. It must not be done by taking for social growth the finery and gloss of mere city customs and observances. It is an improvement that can never come from the atmosphere of boarding schools and colleges as they are now constituted, for boarding schools and colleges pity the farmer's ignorance, and despise him for it. It must, on the contrary, come from an intelligent conviction of the honesty and dignity of rural life; a conviction that as agriculture embraces the sphere of God's most natural and beautiful operations, it is the best calculated, when rightly understood, to elevate and engage man's faculties; that, as it feeds and sustains the nation, it is the basis of all material wealth; and as it supports all other professions and callings, it is intrinsically the parent and superior of them all. Let the American farmer's wife never cease to teach her sons, that though other callings may be more lucrative, yet there is none so true and so safe as that of the farmer,—let her teach her daughters that, fascinating and brilliant as many other positions appear outwardly, there is none with so much intrinsic satisfaction as the life of a really intelligent proprietor of the soil, and above all, let her show by the spirit of intelligence, order, neatness, taste, and that *beauty of propriety*, which is the highest beauty in her home, that she really knows, understands, and enjoys, her position as a wife and mother of a farmer's family—let us have but a few earnest apostles of this kind, and the condition and prosperity of the agricultural class, intellectually and socially, will brighten, as the day brightens after the first few bars of golden light tinge the eastern horizon.

We are glad to see and record such signs of daybreak—in the shape of a recognition of the low social state which we deplore, and a cry for reform—which now and then make themselves heard, here and there, in the country. MAJOR PATRICK—a gentleman whom we have not the pleasure of knowing, though we most cordially shake hands with him mentally, has delivered an address before the Jefferson county Agricultural Society, in the state of New-York, in which he has touched with no ordinary skill, upon this very topic. The two pictures which follow are as faithful as those of a Dutch master, and we hang them up here, conspicuously, in our columns, as being more worthy of study by our farmer's families, than any pictures that the ART UNION will distribute this year, among all those that will be scattered from Maine to Missouri.

"An industrious pair, some twenty or thirty years ago, commenced the world with strong hands, stout hearts, robust health, and steady habits. By the blessing of Heaven their industry has been rewarded with plenty, and their labors have been crowned with success. The dense forest has given place to stately orchards of fruits, and fertile fields, and waving meadows, and verdant pastures, covered with evidences of worldly prosperity. The log cabin is gone, and in its stead a fair white house, two stories, and a wing with kitchen in the rear, flanked by barns, and cribs, and granaries, and dairy houses.

But take a nearer view. Ha! what means this mighty crop of unmown thistles bordering the road. For what market is that still mightier crop of pigweed, dock and nettles destined, that fills up the space they call the "garden?" And look at those wide, unsightly thickets of elm, and sumac, and briars, and choke-cherry, that mark the lines of every fence!

Approach the house, built in the road to be *convenient*, and save land! Two stories and a wing, and every blind shut close as a miser's fist, without a tree, or shrub, or flower to break the air of barrenness and desolation around it. There it stands, white, glaring and ghastly as a pyramid of bones in the desert. Mount the unfrequented door stone, grown over with vile weeds, and knock till your knuckles are sore. It is a beautiful moonlight October evening; and as you stand upon that stone, a ringing laugh comes from the rear, and satisfies you that somebody lives *there*. Pass now around to the rear: but hold your nose when you come within range of the piggery, and have a care that you don't get swamped in the neighborhood of the sink spout. Enter the kitchen. Ha! here they are all alive, and here they *live* all together. The kitchen is the kitchen, the dining-room, the sitting-room, the room of all work. Here father sits with his hat on and in his shirt sleeves. Around him are his boys and hired men, some with hats and some with coats, and some with neither. The boys are busy shelling corn for samp; the hired men are scraping whip stocks and whittling bow pins, throwing every now and then a sheep's eye and a jest at the girls, who, with their mother, are *doing-up* the house-work. The younger fry are building cob-houses, parching corn, and burning their fingers. Not a book is to be seen, though the winter school has commenced, and the master is going to board there. Privacy is a word of unknown meaning in that family; and if a son or daughter should borrow a book, it would be almost impossible to read it in that room; and on no occasion is the front house opened, except when "company come to spend the afternoon," or when things are brushed and dusted, and "set to rights."

Yet these are as honest, as worthy and kind-hearted people as you will find anywhere, and are *studying out* some way of getting their younger children into a better position than they themselves occupy. They are in easy circumstances, owe nothing, and have money loaned on bond and mortgage. After much consultation, a son is placed at school that he may be fitted to go into a store, or possibly an office, to study a *profession*; and a daughter is sent away to learn books, and manners, and *gentility*. On this son or daughter, or both, the hard earnings of years are lavished; and they are reared up in the belief that whatever smacks of the country, is vulgar—that the farmer is *necessarily* ill bred, and his calling ignoble.

Now, will any one say that this picture is overdrawn? I think not. But let us see if there is not a ready way to change the whole expression and character of the picture, almost without cost or trouble. I would point out an easier, happier, and more economical way of educating those children, far more thoroughly, while at the same time the minds of the parents are expanded, and they are prepared to enjoy, in the society of their educated children, the fruits of their own early industry.

And first: let the *front* part of that house be thrown open, and the most convenient, agreeable, and pleasant room in it, be selected as the *family room*. Let its doors be ever open, and when the work of the kitchen is completed, let mothers and daughters be found *there*, with their appropriate work. Let it be the room where the family altar is erected, on which the father offers the morning and the evening sacrifice. Let it be consecrated to Neatness, and Purity, and Truth. Let no *hat* ever be seen in that room on the head of its owner, [unless he be a Quaker friend;] let no *coatless* individual be permitted to enter it. If father's head is bald, (and some there are in that predicament,) his daughter will be proud to see his temples covered by the neat and graceful silken cap that her own hands have fashioned for him. If the coat he wears by day is too heavy for the evening, calicoes are cheap, and so is cotton wadding. A few shillings placed in that daughter's hand, ensures him the most comfortable wrapper in the world; and if his boots are hard, and the

nails cut mother's carpet, a bushel of wheat once in three years, will keep him in slippers of the easiest kind. Let the table which has always stood under the looking glass, *against the wall*, be wheeled into the room, and plenty of useful (not ornamental) books and periodicals be laid upon it. When evening comes, bring on the lights—and plenty of them—for sons and daughters—all who can—will be most willing students. They will read, they will learn, they will discuss the subjects of their studies with each other; and parents will often be quite as much instructed as their children. The well conducted agricultural journals of our day throw a flood of light upon the *science* and *practice* of agriculture; while such a work as Downing's Landscape Gardening, [or the *Horticulturist*,] laid one year upon that centre table, will show its effects to every passer-by, for with books and studies like these, a purer taste is born, and grows most vigorously.

Pass along that road after five years working of this system in the family, and what a change! The thistles by the roadside enriched the manure heap for a year or two, and then they died. These beautiful maples and those graceful elms, that beautify the grounds around that renovated home, were grubbed from the wide hedge-rows of five years ago; and so were those prolific rows of blackberries and raspberries, and bush cranberries that show so richly in that *neat garden*, yielding abundance of small fruit in their season. The unsightly out-houses are screened from observation by dense masses of foliage; and the many climbing plants that now hang in graceful festoons from tree, and porch, and column, once clambered along that same *hedge row*. From the meadow, from the wood, and from the gurgling stream, many a native wild flower has been transplanted to a genial soil, beneath the homestead's sheltering wing, and yields a daily offering to the household gods, by the hands of those fair priestesses who have now become their ministers. By the planting of a few trees, and shrubs, and flowers, and climbing plants, around that once bare and uninviting house, it has become a tasteful residence, and its money value is more than doubled. A cultivated taste displays itself in a thousand forms, and at every touch of its hand gives beauty and value to property. A judicious taste, so far from plunging its possessor into expense, makes money for him. The *land* on which that *hedge row* grew five years ago, for instance, has produced enough since to *doubly pay* the expense of grubbing it, and of transferring its fruit briars to the garden, where they have not only supplied the family with berries in their season, but have yielded many a surplus quart, to purchase that long row of red and yellow Antwerps, and English gooseberries; to say nothing of the scions bought with their money, to form new heads for the trees in the old orchard.

These sons and daughters sigh no more for city life, but love with intense affection every foot of ground they tread upon, every tree, and every vine, and every shrub their hands have planted, or their taste has trained. But stronger still do their affections cling to that *family room*, where their minds first began to be developed, and to that center-table around which they still gather with the shades of evening, to drink in knowledge, and wisdom, and understanding.

The stout farmer, who once looked upon his acres only as a laboratory for transmitting labor into gold, now takes a widely different view of his possessions. His eyes are opened to the *beautiful* in nature, and he looks with reverence upon every giant remnant of the forest, that by good luck escaped his murderous axe in former days. No leafy monarch is now laid low without a stern necessity demands it; but many a vigorous tree is planted in the hope that the children of his children may gather beneath the spreading branches, and talk with pious gratitude of him who planted them. No longer feeling the need of taxing his physical powers to the utmost, his eye takes the place of his hand, when the

latter grows weary, and *mind* directs the operations of labor. See him stand and look with delighted admiration at his sons, *his educated sons*, as they take hold of every kind of work, and roll it off with easy motion, but with the power of mind in every stroke.

But it is the proud mother who takes the solid comfort, and wonders that it is so easy after all, *when one knows how*, to live at ease, enjoy the society of happy daughters and contented sons, to whom the *city folks* make most respectful bows, and treat with special deference as truly *well-bred ladies and gentlemen*.

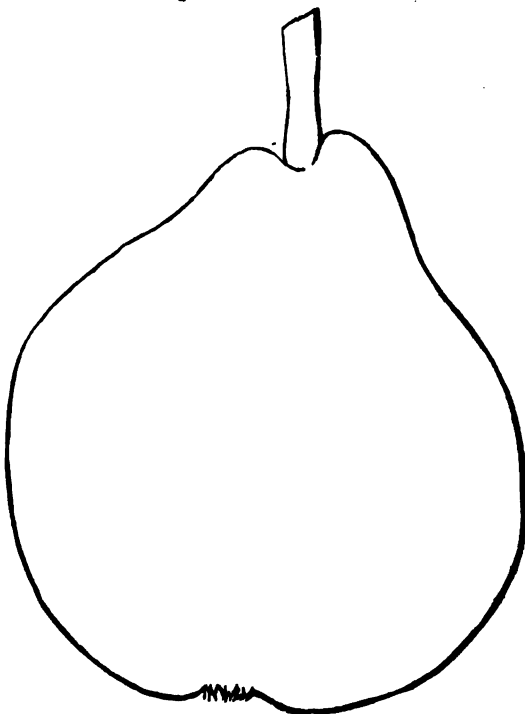
Now, this is no more a fancy picture than the other. It is a process that I have watched in many families, and in different states. The results are everywhere alike, because they are natural. The same causes will always produce the same effects, varying circumstances only modifying the intensity."

A NOTE ON THE TRUE SOLDAT LABOUREUR PEAR.

BY F. L. OLMSTED, SOUTHSIDE, STATEN ISLAND, N. Y.

MY DEAR SIR: Two and three years since, I planted one thousand pear trees, embracing most of the varieties that are much esteemed on quince stock. Most of them fruited last year, but a few varieties not till this. Among the latter is one which I have never seen described in any American publication, and which has given me more satisfaction than any other.

I received a dozen trees from Messrs. PARSONS & Co., which they had received from France with the label *Soldat Laboureur*, but believed to be identical with the *Beurre d'Arenburgh*; the fruit, however, proves to be quite different from that well known sort, as well as from *Glout Morceau*, or anything else that I know. The trees have made a strong, healthy, upright, and naturally regular and pyramidal growth, out-stripping everything else that I have, except possibly, *Beurre d'Amalis*; the shoots of this season, on all parts of the tree, being in every case, on an average, three feet in length. The fruit answers to the following description, which I have to-day received from your French correspondent, M. DESPORTES, as that of the *True Soldat Laboureur*, which is by no means, he says, to be confounded with the *Orpheline d'Eugheim*, (*Beurre d'Arenburgh* as known here,) though it long has been.



True Soldat Laboureur.

TRUE SOLDAT LABOUREUR.—Color, yellow, but covered with grey and russet spots and dots, a little greener about the stem. Texture—skin fine; flesh coarse, white, melting; water abundant; sweet, vinous and perfumed; ripens end of October. It is a very good, first (class) pear. The fruit is generally larger than the above outline. The branches are upright, and it is a vigorous grower.

I have only to express my great regret that the specimens I had intended to send you have been accidentally injured, so much so that they would be of no service in enabling you to judge of its value. I allowed one of my trees to bear a dozen fine fruit, with which burthen its growth was quite as strong as any of the others, so I have no doubt it will prove an early and productive bearer.

The Bartlett is doing remarkably well on quince stocks with me—very productive, and the fruit of fine flavor. Soil, deep clayey loam. Yours respectfully,

FRED. LAW OLMSTED.

South Side, Staten Island, Nov. 24, 1851.

We should be glad to be informed if any other of our fruit-growing readers have proved this fine variety. Ed.

THE COLOR OF BUILDINGS IN RURAL SCENERY.

BY JAS. FENNIMORE COOPER.

[ALL our readers know our doctrine regarding the fancy of our countrymen for *white* paint. We are glad to find the subject so well touched upon in the right spirit, by the late Mr. COOPER, in the following extract from an article by him on our Scenery contrasted with that of Europe, in Putnam's Home Book of the Picturesque. Ed.]

It has been a question among the admirers of natural scenery, whether the presence or absence of detached farm-houses, of trees, of hedges, walls and fences, most contribute to the effect of any inland view. As these are the great points of distinction between the continent of Europe and our own country, we shall pause a moment to examine the subject a little more in detail. When the towns and villages are sufficiently numerous to catch the attention of the eye, and there are occasional fragments of forest in sight, one does not so much miss the absence of that appearance of comfort and animated beauty that the other style of embellishment so eminently possesses. A great deal, however, depends, as respects these particulars, on the nature of the architecture, and the *color* of the buildings and fences. It is only in very particular places, and under very dull lights, that the contrast between white and green is agreeable. *A fence that looks as if it were covered with clothes hung up to dry*, does very little towards aiding the picturesque. And he who endeavors to improve his taste in these particulars, will not fail to discern in time that a range of country which gives up its objects, chiselled and distinct, but sober and sometimes sombre, will eventually take stronger hold of his fancy, than one that is glittering with the fruits of the paint and white-wash brushes. We are never dissatisfied with the natural tints of stone, for the mind readily submits to the ordering of nature; and, though one color may be preferred to another, each and all are acceptable in their proper places. Thus, a marble structure is expected to be white, and as such, if the buildings be of suitable dimensions and proportions, escapes our criticism on account of its richness and uses. The same may be said of other hues, when not artificial; but we think that most admirers of nature, as they come to cultivate their tastes, settle down into a pre-

ference for the gray and subdued, over all the bright tints that art can produce. In this particular, then, we give the preference to the effects of European scenery, over that of this country, where wood is so much used for the purposes of building, and where the fashion has long been to color it with white. A better taste, however, or what we esteem as such, is beginning to prevail, and houses in towns and villages, are now, not unfrequently, even painted in subdued colors. We regard the effect as an improvement, though to our taste, no hue, in its artificial objects, so embellishes a landscape as the solemn color of the more sober and less meretricious looking stones. We believe that a structure of white, with green blinds, is almost peculiar to this country. In the most propitious situations, and under the happiest circumstances, the colors are unquestionably unsuited to architecture, which, like statuary, should have but one tint. If, however, it be deemed essential to the flaunting tastes of the mistress of some mansion, to cause the hues of the edifice in which she resides to be as gay as her *toilette*, we earnestly protest against the bright green that is occasionally introduced for such purposes. There is a graver tint of the same color, that entirely changes the expression of a dwelling. Place two of these houses in close proximity, and scarcely an intellectual being would pass them, without saying that the owner of the one was much superior to the owner of the other, in all that marks the civilized man. Put a third structure in the immediate vicinity of these two, that should have but one color on its surface, including its binds, and we think that nine persons in ten, except the very vulgar and uninstructed, would at once jump to the conclusion that the owner of this habitation was in tastes and refinement superior to both his neighbors. A great improvement, however, in rural, as well as town architecture, is now in the course of introduction throughout all the northern states. More attention is paid to the picturesque, than was formerly the case, and the effects are becoming as numerous as they are pleasing. We should particularise New-Haven, as one of those towns that has been thus embellished of late years, and there are other places, of nearly equal size, that might be mentioned as having the same claims to an improved taste. But to return to the great distinctive features between an ordinary American landscape, and a similar scene in Europe. Of the artificial accessories it is scarcely necessary to say any more. One does not expect to meet with a ruined castle or abbey, or even fortress, in America; nor, on the other hand, does the traveller look for the forests of America, or that abundance of wood which gives to nearly every farm a sufficiency for all the common wants of life, on the plains and heights of the old world. Wood there certainly is, and possibly enough to meet the ordinary wants of the different countries, but it is generally in the hands of the governments or the great proprietors, and takes the aspect of forests of greater or less size, that are well cared for, cleared and trimmed like the grounds of a park. Germany has, we think, in some respects, a strong resemblance to the views of America. It is not so much wanting in detached copses and smaller plantations of trees, as the countries farther south and east of it, while it has less of the naked aspect, in general, that is so remarkable in France. Detached buildings occur more frequently in Germany than in France especially, and we might add, also, in Spain. The reader will remember that it is a prevalent usage throughout Europe, with the exception of the British Islands, Holland, and here and there a province in other countries, for the rural population to dwell in villages. This practice gives to the German landscape, in particular, a species of resemblance to what is ordinarily termed park scenery, though it is necessarily wanting in much of that expression which characterises the embellishments that properly belong to the latter. With us, this resemblance is often even stronger, in consequence of the careless graces of nature, and the great affluence of detached woods; the distinguishing feature existing in

in the farm-house, fences, and out-buildings. Of a cloudy day, a distant view in America often bears this likeness to a park, in a very marked degree, for then the graces of the scenes are visible to the eye, while the defects of the details are too remote to be detected.

THE CALIFORNIA GRAPE.

BY T. A. S., SYRACUSE, N. Y.

DEAR SIR:—I notice in the Horticulturist for the current month, a communication from R. G. PARDEE, Esq., on the California Grape, in which it is stated on the authority of Capt. H——, of the U. S. army, and lady, “as far as their observation extended, and certainly in the vicinity of San Diego, there is no such thing as a native or wild growing grape to be found.” Possibly in the vicinity of San Diego there may not be; but to my certain knowledge—native or wild growing grapes abound on the forks of the American river, the fruit of which I have seen and eaten. I have also been informed by Mr. EGBERT JUDSON, of this city, who has spent a year or more in the mining districts, and others, that the wild grape is abundant on the Upper Sacramento and its tributaries—Feather river and its branches, the Yuba, Bear creek, &c.

The native grape resembles somewhat our native, the Fox, having berries, however, a little larger, of a shade darker color, and being less astringent; or *foxy*, and to us vegetable starved diggers, they were quite palatable.

But in correcting the error of Capt. H——, as to the native grape, I am able to confirm his statement as to the high excellence and superiority of the cultivated variety—except perhaps, as to the size of cluster and berry, which in both respects, in the specimens I saw, were rather below than above the Catawba. This was owing, perhaps, to difference of locality and culture, (mine having been grown at San Jose,) while doubtless, too, his were the better, while mine were the more indifferent specimens—which had undergone a land carriage of eighty or one hundred miles, but which were retailed readily to the miners at a dollar a pound.

I think “the California Grape” would be an acquisition with us—or rather, perhaps, farther south; but doubt whether it would maintain its high excellence in our comparatively wet and variable climate this side of the Rocky Mountains. I agreed fully with those who regard the soil and climate of California highly favorable to the culture of the grape; and attribute much of the superiority of this grape to these circumstances. Yours.

T. A. S.

Syracuse, Nov. 20, 1851.

P. S. While visiting California, in the spring of 1849, I took a box of the seed of the Black Hamburg and Early White Muscat, which were planted by the side of my log cabin, and around stumps in the vicinity. Possibly California will become celebrated at some future day, for the superiority of a *new native* grape.

REMARKS.—As corroborative of the information in the former number, regarding the grapes at San Jose, we quote the following extract from a private letter lately received by us from an intelligent lady in San Francisco: “The neighborhood of San Jose, sixty miles south of this, must have a better climate than ours, for they are already, (September,) sending us their grapes in most picturesque clusters a foot long. These grapes are arranged differently upon the bunches from any I ever saw, being placed, large and small, so as to form a long, tapering, regular cluster. I ought to add that there is in their taste

a dash of wild flavor, like that of our Frost Grapes. But I am told they are sweet and rich, when fully ripe."

It is clearly worth some pains to get these California grapes into our gardens. Ed.

NOTES ON NEW OR SCARCE PLANTS.

HABROTHAMNUS CORYMBOSUS.—*The Corymb-flowered Habrothamnus.* This plant is an erect, much-branched shrub, with somewhat herbaceous stems, and alternate, large, ovate-lanceolate leaves, attached to the stems by a shoot-stalk. Towards the ends of the main branches smaller ones are produced, each of which is terminated by a corymb of flowers. The flowers are funnel-shaped, gradually widening upwards, then contracting, having a pitcher-shaped appearance; the limb is divided into five long narrow segments, which become reflexed. These flowers which are produced in profusion, are of a deep rose color, and very ornamental.

This species is a native of Mexico; and has flowered in the Royal Botanic Garden of Kew, to which it was sent by Mr. Low, of the Clapton nursery. It is a plant of very rapid growth, requiring only the protection of the green-house in the winter season, and in summer thriving freely in the open air. Plants of this nature require to be well attended when young, to cause them to produce a sufficient number of shoots to form a handsome plant; and they ought not to be planted



The Corymb-flowered Habrothamnus.

in a soil and situation too much conducive to vigorous growth; for rapid growing plants of this half-fleshy character are found to thrive better when the development of them is not too freely induced by stimulants of this kind. A large plant of this kind would doubtless make a good display in the flower garden, as a single plant; and when so required, it must be planted out as early in the season as possible, to be safe from frost.

It belongs to the natural order of Solanaceæ; and in the Linnæan arrangement to Pentandria monogynia.—*Hort. Mag.*

ANEMONE JAPONICA.—*The Japanese Wind-Flower.* This is a very vigorous growing herbaceous perennial, of great beauty. It has the kind of compound, ternate lobed leaves, possessed by many of the Anemones, but in this case they are large, and coarse, and unequally serrated on the margin. It grows two feet high, or more, and has purplish-red flowers, scarcely inferior to those of the Chrysanthemum, or the Poppy Anemone of the East: they are, indeed, not unlike a small semi-double Dahlia bloom, and are fully as large as a small Dahlia. Its degree of hardiness is not yet ascertained, but it is expected to bear the severity of our winters,—and if so, will prove a most valuable addition to hardy border flowers. It flowers in September and October; and was introduced by the Horticultural Society, who received it from their collector, Mr. Fortune, in 1844. Mr. Fortune met with it at Shanghai, the Japanese port of China.

According to Dr. Siebold, it inhabits damp woods on the edges of rivulets, on a moun-

tain called Kisserne, near the city of Miako, in Japan. It grows also at considerable elevations on the mountains in the centre of Japan, whence Siebold concludes that it will bear the rigour of a continental winter. It is much cultivated by the Japanese for its beautiful flowers.

In the garden of the Horticultural Society, it has hitherto been kept in a pot, in a cool green-house: this was, however, on account of its scarcity, and for fear of losing it; and such treatment is by no means expected to be required. It will grow freely in any rich, light, loamy soil; and requires a considerable, rather abundant supply of water.

In the natural arrangement it ranks under Ranunculaceæ; and in the Linneæan, under Polyandria polygynia.—*Jour. Hort. Soc.*

ABELIA RUPESTRIS.—A small spreading bush, with deciduous, bright green foliage. The branches are very slender, covered with fine down, and deep reddish brown, when fully exposed to the sun. The leaves are opposite, ovate, distantly serrated, on very short stalks, quite smooth except at the midrib on the underside, where they are closely covered with short hairs. The flowers are pure white, something like those from the honeysuckle, and come in pairs from the axils of leaves belonging to the short lateral branches. At the base of the ovary stand three very small bracts. The ovary itself is slender and downy; surmounted by a calyx of five obovate ciliated sepals, which are slightly stained rose color, and rather membranous. The corolla when expanded is half an inch long, funnel-shaped, downy, with a spreading border of five convex ovate blunt equal lobes, beyond whose tube extend four smooth filaments.

The plant is distinguishable from *Abelia chinensis* of Brown, by its want of involucre, smooth leaves, and not trichotomous flowers; and from the *Abelia serrata* of Zuccarini and Siebold, by its five leaved calyx. It has hitherto been treated as a greenhouse plant, but will probably prove hardy enough to stand out of doors in mild winters. The soil which appears most suitable is rough sandy loam, mixed with a little peat. Being of free growth, an ample supply of water is necessary during the summer season. In winter nothing different from the general treatment of greenhouse plants is required. It is propagated from cuttings of young wood, in the usual way. From its being sweet-scented, and the length of time it remains in flower, this will be of considerable importance as a greenhouse plant; and, should it prove hardy, it will doubtless be a good addition to the shrubbery in consequence of its flowering in autumn. Received from Mr. Fortune, June 20th, 1844, as a fine dwarf shrub, found amongst rocks on the Chamoo Hills, China.—*Jour. Hort. Society.*

INDIGOFERA DECORA.—A dark green handsome bush, with somewhat glaucous branches. The leaves are pinnate in from two to five pairs and an odd one, quite smooth on the upper side, but slightly covered on the under side with very fine hairs, attached by their middle; the leaflets are exactly ovate, with a short bristle at their end, between 1½ and 2 inches long, of a very dark green color; and to each pair there are two short bristle-like stipules. The flowers grow from the axils of the leaves in horizontal racemes much shorter



The Japanese Wind Flower.

ter than the leaves themselves; they are of a light rose color and very handsome. The calyx is a flat membranous five-toothed cup, with the two upper teeth very far apart. The standard of the corolla is oblong, nearly flat, very slightly keeled behind, nearly white, but pencilled with delicate crimson lines near the base; in length it is equal to the wings and keel, and forms with them an angle of about 45° when expanded; the wings are narrowly lanceolate and ciliated, of a pale bright rose color; the keel is rather paler, and bordered with a woolly or very downy upper edge. It is a greenhouse plant which will grow freely in almost any sort of soil, especially sandy peat. In summer an ample supply of water is required, and air at all times when the weather is favorable. To prevent the leaves from being scorched by the sun, it will be necessary to use shading. In winter, water should only be given when the soil becomes dry. It strikes freely from cuttings under ordinary treatment.

[This is one of the prettiest plants brought from China by Mr. FORTUNE. We saw it in the garden of the London Hort. Society, last year, blooming very freely, and thought it one of the loveliest of the new hardy plants. It had stood the winter on a piece of dry rock work, and there can scarcely be a doubt of its hardiness here. ED.]

NOTES ON EVERGREEN TREES.

THE Deodar Cedar is the most popular of all the new evergreens yet proved in this country. It deserves its popularity. It is at once the most hardy, the most beautiful, and the most rapid growing of them all.

The largest trees of the Deodara that we have in any of our nurseries, are in Mr. HANCOCK's grounds, near Burlington, N. J. This cultivator has perhaps 400 trees from four to five feet high. The soil in which they stand is a sandy loam. They were imported from France two years ago, and are now growing in the open nursery rows. The vigor and beauty of these trees is surprising. Some of them have made shoots nearly three feet long the present season. They all begin to assume that drooping, elegant habit, which makes this the most graceful of evergreen trees. And, as they grow older, the silvery tone of the foliage is also more conspicuous. Everybody is planting Deodars, and all the nurserymen are busy, importing and propagating them. Messrs. PARSONS have, we understand, a stock for about four thousand young plants, one year established. Every large nursery in the country now advertise it, and the Deodar or Sacred Cedar of India, will in a few years we hope, be found in every ornamental plantation in the country.

We are glad to notice the *Hemlock* attracting more attention. It is the finest evergreen tree indigenous to North America—for ornamental purposes. A great many persons, who only know the Hemlock in the woods, affect a contempt for it as an ornamental tree. They think it "scraggy, ugly, and wild-looking." They only show their ignorance. Have they ever seen a Hemlock planted in the midst of a piece of smooth lawn—the soil a deep loam and the site favorable? No. Then they have yet to discover how full of symmetry, how finely proportioned, how graceful, how rich and dark a green in winter, how pure and soft a green in spring is the Hemlock. In fact it is as handsome as the Deodar—and is very much like it. The latter droops more and is *silvery* in its foliage, instead of *bronzy*,—but they are much alike otherwise, and are the best possible companions in the pleasure grounds.

A third tree that is worthy of high praise is one that comes to us from the mountains

near Monterey—the evergreen Cypress. (*Taxodium sempervirens*.) But it is only fit for ornamental grounds south of Philadelphia. At Baltimore, Washington, and all south and west of that, it will be a great acquisition. North of Philadelphia—except in very favored spots, it is injured by the winters. In the south of France, at Angers—the climate of which is about as mild as that of Norfolk, it succeeds admirably. From a paper on this tree by our correspondent there, M. DESPORTES, we translate the following account of the habits of the tree.

The evergreen Cypress is undoubtedly one of the most gigantic of coniferous trees, attaining the height of 300 feet. The wood of this *Taxodium* is invaluable for timber—and is called by the settlers in that part of California where it grows—Red-wood—or bastard Cedar. Even in the midst of these thick forests, it attains a height of 180 feet. The trunk has a circumference of from 15 feet to 21 feet; it grows in the forests as straight as an arrow, and is naked of branches to the height of 60 or 70 feet. One of these trees has been measured, which was 51 feet in circumference at six feet above the ground! The bark is very thick, the wood is of a beautiful red color, (like that used in making lead pencils;) the grain is fine, the texture light, but breaks easily. It has the property even if used unseasoned, of not warping and not being attacked by insects. All its qualities render it extremely proper for both exterior and interior work. It is, consequently, an important article of exportation, and a great quantity of the wood is annually sent to Santa Cruz for that purpose.

Besides this account of its indigenous character, M. DESPORTES adds that is not only perfectly hardy at Angers, but that it is much the most *rapid growing* hardy evergreen (coniferous) tree yet known. A specimen planted in M. LEROY's nursery, in 1845, in five years has attained a height of 21 feet. The diameter of the trunk near the ground is 20 inches. Another tree is 25 feet high, in a lighter soil. The branches covered with rich dark green foliage fall in rich festoons to the earth, and produce the most picturesque effect. Besides being one of the most ornamental of evergreens, the evergreen Cypress, continues M. DESPORTES, is one of the easiest of reproduction. Although but lately introduced into France, the nurseries are already well stocked with them. Some specimens that have been planted in the park show that it is destined to be a tree in great demand.

This tree is so hardy at Angers that M. DESPORTES commends it seriously to those who plant timber for profit. We can only urge our readers south of Philadelphia to lose no time in planting it in their garden scenery.

A NEW STRAWBERRY FROM THE SOUTH.

BY R. G. PARDEE, PALMYRA, N. Y.

I received per steamer Georgia, last month, from New-Orleans, a box of strawberry plants, of a new and remarkable variety.

My attention was first called to them about six months ago, by the editorial comments of the New-Orleans papers, representing them as of very large size, luscious flavor, combined with an extraordinary habit of profuse, constant bearing, during a period of six to seven months in each year.

Supposing there might be some mistake about it, yet I considered it worthy of investigation, and accordingly I sought a correspondence with the originator of the seedling, who, by the way, I am assured, is a gentleman of character, intelligence, and fortune.

During an extended correspondence of some months, he politely favored me with the following facts.

After trying various experiments with the strawberry, during a term of years, he at last succeeded in obtaining some, four or five years ago, a cross between Myatt's British Queen and Keen's Seedling, which proves to be all he desired, and he has named it the "*Crescent Seedling*." He assures me that the plant keeps in constant bearing each year, from Christmas to the 15th July, in the vicinity of New-Orleans, without exhausting the plant; and he adds, "I neither cut off the blossoms, nor any part of them, to increase their bearing—it is one continued crop from the "*first jump*." So remarkably prolific are they with me, that for six months the same plant is in *blossom*, *unripe* and *ripe* fruit together—so that at the expiration of the fruiting season, the plants are completely worn out, but not until they make three or four runners, each with which I plant anew each succeeding year—all the *old stools die out*. They are now, (9th Nov.) coming into blossom, and will so continue until July or August. The fruit is very large, often measuring five and a half inches in circumference, conical, the color a dark red, and highly flavored. I cultivate them in hills 30 inches apart each way, and have half an acre under cultivation at this time."

He further adds—"I freely admit that I consider their extraordinary bearing qualities purely accidental, and you will at once remark how different the *leaf* and its *thickness* is to every plant of its species you have heretofore seen."

The last remark is strikingly true of the plant, which has the thinnest and most delicate leaf imaginable, and yet the color and habit of the plant is very luxuriant. After one or two failures, I have at last succeeded in getting on a dozen plants in fine growing order, and I shall with much care and interest watch their development, if not with full confidence.

If their fruiting season as far north as this, can be extended through the hot months of June, July and August, it will certainly prove a great acquisition to the north.

R. G. PARDEE.

Palmyra, N. Y., Dec. 12, 1851.

ON THE PRIZES AT OUR HORTICULTURAL SHOWS.

BY A WORKING GARDENER, PHILADELPHIA.

DEAR SIR—I believe if gardeners would interest themselves more in diffusing a knowledge of the culture of plants in general, it would promote not only a higher state of culture, but induce many to put a hand to the plough, who, for fear of failing through incompetency, would glean a knowledge of what they *really love*, and shortly become true devotees to Flora. The gardeners of England, whose ambition it is to excel each other in a higher state of culture, are a class of men who accustom themselves to read, write, investigate and question, through their communicating channel, the *Gardener's Chronicle*, drawn on by their great leader, LINDLEY. Hence they arrive at true principles, and practical information. Seeing in your pages the spirit of improvement, I am convinced of your willingness to assist, and your ability to lead gardeners in this country, to a higher state of things. Under that impression I have been induced to write the following remarks on horticultural exhibitions, believing them to be the *effectual* means of working out a more elevated state in horticulture. As gardeners have no *direct* influence with the gentlemen of those societies, it is only through such channels as your valuable Journal, that they can

get their suggestions brought before the respectful notice of those who have the power of carrying into effect that which they consider essential.

The Pennsylvania Society, I believe, stands first in the annals of American Horticulture. I was present at the annual meeting, and beheld two noble saloons filled with fruits, vegetables, and plants. Plants! did I say,—yes plants, (but what had become of their flowers I can't pretend to say.) Whoever has witnessed a Chiswick exhibition in the great metropolis of England, or a Regent's Park show, will contrast the difference between the two. He will contrast the difference between a plant five or six feet high, and as much in the diameter of its branches, regularly trained from the rim of the pot, without a stick, into a symmetrical bush, densely covered with flowers, and such as filled the saloons of the show in Philadelphia.

The latter plants had unshapely heads set upon branchless stems three or four feet high, denoting a system of being *grown by the yard*; contrast the difference between what we call exhibition plants on the two sides of the Atlantic, and then let us ask if a step in advance is not required here? But there was a time when the metropolitan exhibitions of England had their commencement. There was a time when the gardeners of England exhibited plants resembling hop poles; there was a time when *their* plants appeared to be *grown by the yard*; there was a time when their pots were full of sticks, instead of flowers, and there was a time when all this was thought to be *gardening in perfection*. But the *glory* and ignorance of that day have all passed, and are only remembered as a dream. Now, the hop poles are reduced to symmetrical plants, the shower of sticks is annihilated by a short, stiff, self-supporting truss, and the plant itself defies you to detect any irregularity, or any want of inherent strength and beauty. And what has worked this great change? Nothing but a liberal spirit of competition. Not competition for money, nor medals, but for ability; and this is the kind of competition we want here; some of our competitors may ask, is there no ability displayed in our fruit department? I answer none; that which you exhibit by the *peck* and the *bushel*, certainly has not occupied much of your attention. It is art combined with nature, that shows man's abilities. Nature produces the bunch of Hamburgs, but it is by man's assisting ingenuity that the full amount of coloring matter is produced there. We certainly can produce fine peaches, pears, apples, and good native grapes; and what tailor, I ask, in the United States, can't do the same?

He who makes Horticulture his profession, surely should excel the non-professional man. But alas! still the Hamburgs are *red*,* huddled together like marrow-fat peas, and polished as though they were intended for mirrors. Can't this be altered—can't the gardeners of America produce as high a colored bunch of grapes as those of England? Certainly if they like. Nature has laid a bounteous soil, a bright sun and a clear sky, and these are superior advantages to those of England. Then try what can be done. I think I hear the gardening voice of this mighty country crying, "A new beginning with the new year,"—let us see by our culture that the finger and thumb have superceded the knife. Let us question the utility in allowing a branch to grow to be cut back by the knife and thrown away; let us see plants grown in pots without long unsightly stems, and grown into compact globular bushes by finger and thumb pruning. Show the nurserymen how to produce flowering plants, instead of bits tied up to sticks three times larger than the *so called* plant itself. But, say the gardeners, the inducements are not held out to us by our Societies—the arrangement of our Horticultural Society is too limi-

* Though there is some truth in our correspondent's criticism of the Philadelphia shows—we are bound to say that nowhere in Europe are finer foreign grapes to be seen than at the Boston exhibitions. Ed.

ted in each class, and the Society allows the nurseryman to compete with the amateur and gardener, therefore a gardener who grows fifty plants has no chance with a nurseryman, who grows a thousand. Again, there is no distinction as to what are required—the “*best collection*,” leaves you at liberty to furnish what *kind* of plants you like. I am growing a few greenhouse plants and they may be good—my neighbor, who has a little more convenience than me, when competing, may add an exotic or two, or an Orchidæ, and if so my plants are thrown in the shade and unnoticed, and then I go away determined not to exhibit any more. Now were our society to establish a classified arrangement, and were each class to have three or four prizes, stating the number of plants required to each class thus: Pelargoniums, for the best 12 in 8 inch pots, 3 prizes; for the best 8 in 8 inch pots, 3 prizes; for the best 6 in 6 inch pots, 3 prizes; for the best single specimen in 10 inch pot, 3 prizes; and in like manner with fruit and vegetables, as well as plants, every man would stand an equal chance, and we should have better plant growing, more plant selling—more competition, altogether more satisfaction. The saloons would also be better filled with flowering plants. If my memory serves me correctly, our society intend to offer a premium, in 1852, for the best forty Dahlias. Now what chance will an amateur or gardener have for that prize? It is not very probable that the best cultivator will get it, but he who grows the greatest quantity—and I think to large growers, they would have found 24 sufficient, and there would be double the competition. We ought to have a chance at 12 and 6, with the best single specimen of any color, and to run out in classes as before mentioned. This would increase the sale, the quantity to be exhibited, a love to cultivate and improve. In like manner does the whole schedule require a proper *classification*, in order that each subscribing gardener may have a chance to display his ability.

I feel perfectly convinced that if gardeners had any means of bringing their ideas before the committee, those gentlemen would gladly accede to anything that would tend to improvement, and I think there is great room. “*Floral Designs*” seem to be the principal feature at the annual meeting; \$30 and \$40 are given for the first and second best design, a thing in my opinion not at all connected with Horticulture, but which any *weaver* may devise. [We quite agree with our correspondent about the tastefulness of these designs, and the folly of paying for them. Ed.] I was told that the Secretary actually paid \$30 for a design in the September meeting, that I think was a most excellent representation of a *toad stool*, by the side of which perhaps stood a specimen plant that had taken months to grow it, and all the vigilance and care it is possible for man to bestow on it, in keeping in perfection for the specified time, and all for one dollar; or perhaps “a collection,” for a little more. Is there no alteration required in this respect?

The above remarks are not written from any party feeling, but purely for the benefit of all, believing such an arrangement would best suit the necessities of exhibitors.

Yours very respectfully,

A WORKING GARDENER.

Near Philadelphia, Dec. 2, 1851.

A CHAPTER ON DOGS.

BY AN ENGLISH REVIEWER.

[We condense from a capital English review of M. BLAZE's work on Dogs, the following chapter—which we are certain will be read with great pleasure by all our readers in the country.]

THE dog alone, of all the brute creation, shows a perfect attachment—alone understands our wishes, adapts himself to our habits, waits upon our commands, associates with us as a friend. The service of man, while a single link of the connexion remains, is a necessity of his existence. The Siberian dogs, set free in summer to shift for themselves, though overtaken, treated with brutality, and nearly starved, return to their masters at the approach of winter, to be harnessed to the sledge. The Pariah dog of India, when homeless and unowned, will fasten on a stranger, and exhaust every art to induce him to adopt it. Colonel Hamilton Smith tells of one that fixed his regards on a gentleman traveling rapidly in a palanquin, and continued to follow him with wistful eyes, till he dropped with fatigue. No one can question that this disposition of the dog is a peculiar gift of Providence for the benefit of our race. Other animals surpass him in beauty and strength, yet in every quarter of the globe, the dog alone is in alliance with man, because he is alone endowed with that impulse that renders him accessible to our advances, and submissive to our will. His domestication, in the opinion of Cuvier, is the most complete, the most useful, the most singular conquest we have achieved, and perhaps, he adds, essential to the establishment of society.

The vast power and courage of certain races of the dog are truly extraordinary. The story told by Pliny of an Albanian dog of Alexander the Great, who conquered, one after another, a lion and an elephant, is probably a fable, like the addition of Ælian, that his tail, his legs, and his head, were severally amputated without loosening his hold, or producing even an appearance of pain. As little do we credit the feats of a mastiff in the reign of Elizabeth, who was reported to have fought and beaten in succession, a bear, a leopard and a lion. But there are better grounds for believing that one of this species really engaged the king of beasts in the reign of Henry VII., who absurdly ordered him to be hanged for his presumption: and it has been frequently proved that three or four can carry off the victory. Colonel Hamilton Smith was witness of a scene between a bull-dog and a bison, in which the former seized the latter by the nose, and kept his hold till the infuriated animal crushed him to death. The terrier grapples with beasts of twenty times his size, and, however cruelly mangled, dies without a groan. It is thus that the dog, who provides the savage with food by his swiftness, protects him by his bravery. Such prowess and endurance belong to few of our domestic breeds. But nature develops the faculties which the occasion demands. The dogs that live amidst wilds and dangers are all conspicuous for hardihood, daring, and insensibility to pain. Their cunning and sagacity are in like manner proportioned to their needs. The dogs by the Nile drink while running to escape the crocodiles. When those of New-Orleans wish to cross the Mississippi, they bark at the river's edge to attract the alligators, who are no sooner drawn from their scattered haunts, and concentrated on the spot, than the dogs set off at full speed and plunge into the water higher up the stream. An Esquimaux dog, that was brought to this country, was given to artifices which are rarely seen in the native Europeans, whose subsistence does not depend on their own resources—strewing his food round him, and feigning sleep, in order to allure fowls and rats, which he never failed to add to his store.

But even with us, the dogs who hunt on their own account, display an ingenuity which is seldom attained by those who hunt for a master. The wily lurcher, who, more than any other dog, is addicted to poaching, when he puts up a rabbit, makes for her burrow, and there awaits her arrival. M. Blaze had two dogs that hunted by stealth, of whom one started the hare, and the other, concealed behind a fence, pounced on her as she passed through her accustomed run. A story is told of a pointer and a greyhound who combined together—the greyhound availing himself of the scent of the pointer to find the game, the pointer of the speed of his associate to catch it. The pointer becoming suspected was furnished with a chain to impede his movements; and still continuing his roving life, it was at length discovered that the greyhound, in order to enable him to hunt as usual, carried the chain in his mouth, till he himself was called upon to take up the chase. The skill of the common hound, though less striking, is still proportioned to the exigencies of the service, and is something more than a mere instinct; for when a young dog is entirely at fault, one experienced in the craft, will detect the doublings of the fox or the stag, the devices to break the scent, or the attempts to divert it, by starting another animal. It is practice which has taught him to unravel the intricacies of the chase, to distinguish between conflicting scents, to divine the ruse of a fugitive that is fertile in resources. In one thing, however, old dogs and young, tame dogs and wild, are all alike, and that is in the interest they take in sport. The symptoms of preparation never fail to produce in them the most lively transports. The dog whose master is accidentally prevented from taking the field, will often seek out a neighboring sportsman, and enlist in his service for the day, though it would be a vain effort to entice him for any other object, and equally vain to attempt to retain him when the sport was at an end. Even in the company of his master, true as he is to his allegiance, he will attach himself for the occasion to a total stranger, who chances to be a better shot; and yet, far from deriving any advantage from the result, he entertains a dislike for the bones of game, which he eats, when he eats them at all, with the reluctant air that shows them to be distasteful.

As a carrier of merchandize, the most delicate task which a dog has to perform is in the inland smuggling trade of the Continent. In this arduous service, which is constantly fatal to him, he shows a wonderful sagacity. Loaded with goods he sets out in the night, scents the custom-house officer, attacks him if he can take him at a disadvantage, and conceals himself, if escape is difficult, behind a bush or tree. On his arrival at his destination he will not show himself till he has first ascertained that the coast is clear, and while he remains gives warning of the approach of the common enemy. It is manifest that a whole army of custom-house officers can do little towards exterminating smugglers, of whom the supply is unlimited, who cross the frontiers in silence and darkness, whose road is the pathless wood and plain, who snuff danger in the wind, and who either evade it by their swiftness, or find a lurking place in every hedge row.

We turn with pleasure from the illicit functions in which the monopoly of guilt and profit is to the man, and that of peril and suffering to his faithful animal. The shepherd's dog in his own department, is a perfect miracle of intelligence. He understands the sign, the voice, the look of his master. He collects the scattered sheep at the slightest signal, separates any one that is indicated from the rest of the flock, drives them wherever he is told, and keeps them all the while under perfect control, less by his active exertions than by the modulations of his voice, which expresses every tone, from gentle instruction to angry menace. These are his ordinary performances, visible every day in a thousand pastures. But he can do greater wonders. It chanced one night that seven hundred lambs, committed to the keeping of the Ettrick Shepherd, broke loose from his control and scam-

pered away in three divisions over hill and plain. 'Sirrah, my man,' said Hogg mournfully to his *colly*, meaning it for an expression of grief, and not for a direction, they're awa.' Silently, and without his master's knowledge, for it was too dark to see, the dog left his side, while the shepherd passed the hours till morning in a weary and fruitless search after his wandering charge. At the dawn of day he was about to return to his employer with a heart full of despair, when he caught a sight of Sirrah guarding at the bottom of a deep ravine, not, as he at first supposed, one division of the lambs, but the whole of the vast flock, without a solitary exception. 'It was,' says James Hogg, 'the most extraordinary circumstance that had ever occurred in my pastoral life. How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself, from midnight until the rising of the sun, and if all the shepherds in the Forest had been there to have assisted him, they could not have effected it with greater propriety.' On another occasion the same famous shepherd saw a dog, when it was utterly dark, put upon the path of a ewe that had been lost by her owner near a neighbor's farm, and which was supposed to have mingled with her fellows that were feeding in the surrounding pastures. 'Chieftain,' said the master of the dog, pointing to the spot from which the sheep had gone off, 'fetch that, I say, sir—bring that back; away!' And away he went, and back he brought in half an hour the identical sheep. A sheep-stealer who was at last discovered and hanged, used to carry on his trade by secretly signifying the particular sheep that he wanted out of a large flock, as he viewed them under the pretence of purchasing, to his dog, who returning by himself, a distance of several miles, at night drove the selected sheep, which were undoubtedly the fattest, to his fastidious owner. Both Scott and Hogg relate this picturesque story most circumstantially from the annals of the Justiciary Court in Scotland. Sir Thomas Wilde knew an instance in which three oxen out of some score had mingled with another herd. 'Go fetch them,' was all the instruction the drover gave his dog, and he instantly brought along with him those very three. A cattle dealer, accustomed to drive his beasts for nine miles, to Alston in Cumberland, once for a wager, sent them alone with his dog. The animal perfectly understood his commission. He kept the straight road, ran when he came to a strange drove, to the head of his own, to stop their progress, put the beasts that blocked the path upon one side, then was back again to the rear, to lie on his charge, and thus adroitly steering his way and keeping his herd together, he carried them safely to the destined yard, and signified their arrival by barking at the door of the dwelling. More than this, the dog will on emergencies, volunteer services which occur to none but himself. One has been known of his own accord, to overtake a runaway horse, seize his bridle, and hold him fast till he was secured. Lately, in France, a stable took fire that was full of cattle, and, as usual, the animals, stricken with terror, refused to stir. It caught the eye of the farmer's dog, who rushed in, and by barks and bites, forced out at two several charges, the greater part of the beasts, and went back a third time for a few remaining sheep, when the flames had made such progress that they were already dead.

It may be questioned after all, whether the sagacity of the dog in keeping sheep is equal to his sagacity when he has taken to kill them, a vice that is incorrigible when once contracted, admitting no other remedy than the death of the culprit. The dexterity by which he endeavors, as if aware of the consequences, to escape detection, is not surpassed, and hardly equalled, by human felons. Sir Thomas Wilde was cognisant of a case in which the dog had learnt to slip off his collar and put it on again when he returned from his nocturnal depredations. In a similar instance, the animal took the additional precaution of washing his bloody jaws in a stream, unless indeed, the supposed act of cunning was sim-

ply the result of thirst. Bewick, in his *History of Quadrupeds*, mentions a dog that for three months committed havoc on every side, in defiance of the most strenuous exertions to effect his destruction. His habit was to sit on a hill from whence he could command a view of the surrounding roads, and have time to escape at the approach of danger. On this watch-tower in which he placed his security, he was at last shot.

The true house-dog is more amiable, and equally efficient. It has been absurdly affirmed that his value is proportioned to his timidity, because he is thereby rendered doubly clamorous, from his anxiety to obtain protection for himself. But such a dog is of as little service in indicating danger, as an alarm-bell would be that was rung unceasingly. He barks at every thing—the wind and the moon, as well as the thief, and either keeps you in perpetual terror, or teaches you to neglect his warnings altogether. Neither is there no alternative between silence and cowardice. Every one that has had to do with dogs, must be well aware that many breeds which give a loud alarm, are models of bravery. In general, however, the quiet dog, like the quiet soldier, is the most determined. The house-dog is capable of being brought by education, to any degree of perfection. From his kennel in the court-yard, he distinguishes the habitual inmate from the occasional visitor, the visitor from the stranger, the stranger from the thief, as is easily gathered from his monitory bark. His hearing is probably the principal sense by which he conducts this delicate analysis, recognising the step of those who frequent the house, and with others discerning the firm and honest tread of innocence from the doubtful, hesitating, stealthy pace of timid guilt. His temper is too often soured by his being constantly chained, and then he becomes indiscriminate in his attacks, and is liable to fly upon any body he can reach. But when judiciously treated, he is a rare combination of fidelity to his master and humanity to others. It is no uncommon thing for him to attend the thief through the premises, without on the one hand permitting him to touch a single article, or on the other, attempting to molest or detain him. Still, where the intention is clearly criminal, the courtesy of the dog is by no means to be reckoned on; for if he forbears to bite, he is apt to drive the depredator into a corner, and keep him shivering with fear and cold, till assistance is procured. When his master is in question, his courage rises to a pitch of heroism. Petrarch had a dog that snatched a naked sword from the hand of a villain who attacked him. Some thieves in France, laid one night a leg of mutton on the road, to detain the dog of a traveller, whom, when he had got some distance from his protector, they robbed and murdered. The dog arrived from his repast before the thieves had escaped, and engaged them in battle. It was in vain they fired at him. He continued to fight till he strangled one, and drove the other into a tree, at the foot of which he steadfastly remained till the officers of justice relieved him of his prisoner on the following day.

A long train of anecdotes attest the retentive memory of the dog for the assassin of his master, and the vengeance he takes on him. The first is that related by Plutarch, in which king Pyrrhus made his army defile before a dog, who for three days guarded a murdered corpse, without eating or drinking, and who seized the culprit as he passed along. The most notorious is the story of the dog of Montargis, who dragged his master's friend to the spot where he was buried, flew on the assassin wherever he met him, and finally overcame him in a single combat which took place by the orders of Louis VIII. Benvenuto Cellini, who, notwithstanding that his vanity and superstition have often seduced him into the belief of absurdities, appears, nevertheless, not to have exaggerated his impressions, has given a graphic narrative of an incident which happened to himself. A thief one night broke into his shop. The dog contended with the culprit, though he

was armed with a sword, and next running into the journeymen's chamber, awoke them by drawing off the bed clothes, and pulling them alternately by the arm. The men, not comprehending the cause of his importunity, drove him from the room and locked the door. Nothing daunted he returned to the charge, and overtaking the thief who had retreated into the street, he held him by the cloak. The fellow had the wit to cry out *mad dog*, which brought the loiterers to his assistance, and for this time he escaped. After a considerable interval, as Cellini was walking in one of the squares of Rome, his dog flew on a young man, and endeavored to tear him to pieces, in spite of the sticks and swords that were brought to his defence. The dog was got off with great difficulty, and the man was retiring, when some bundles fell from under his cloak, in one of which Cellini espied a little ring of his own. 'This is the villain,' he exclaimed, 'that broke open my shop, and my dog knows him again;' and he once more let loose the animal—but the thief lost no time in imploring mercy, and confessing his crime.

The most mysterious faculty of the dog, one that approaches to divination, is yet to be told. A dog of Henry III. of France, was perfectly furious toward the regicide Clement, as he advanced to the audience in which he slew his sovereign, and could with difficulty be retained in an adjoining room. The mere nastiness of the monk may have excited the bile of the dog. But there is an equally celebrated case, in which an English mastiff, who had never attracted the regards of his master, followed him one night to bed, and though repeatedly repulsed, could not be quieted till he got permission to remain. That same night an Italian valet entered his master's room with a design to murder him, and was only prevented by the faithful sentinel pinning him to the ground. The solution must be looked for either in the minute observation of the dog, which leads him to notice circumstances that escape our eyes, or else in a conjecture adopted by M. Blaze, that the emotion of a man who meditates a crime produces a peculiar odor from his body.

The dog who prevents your property from being stolen, will sometimes recover it when lost. A lady in Bath found her road blockaded by a strange mastiff, who compelled her to retrace her steps, and brought her to the spot where she had dropped a shawl, which he no sooner saw in her possession, than he galloped away. A boy who let fall some cakes from a basket, found, on his arrival at home that the greater part had been gathered up by his dog, who deposited them untasted, and then set off to fetch the remainder. Mr. Bell, in his 'History of British Quadrupeds,' mentions that a friend of his own dropped a louis-d'or one morning, as he was on the point of going out. On returning late at night he was told by his servant that the dog had fallen sick, and refused to eat; 'and what,' says Mr. Bell, 'appeared very strange, she would not suffer him to take her food away from before her, but had been lying with her nose close to the vessel, without attempting to touch it. On my friend's entering the room, she instantly jumped upon him, laid the money at his feet, and began to devour her victuals with great voracity. An affecting story has frequently been told of a dog who persevered in leaping upon the horse of a traveller, to call his attention to his money, which he had left on a bank where he halted to rest. His master, imagining he was mad, shot the poor animal, who retired to die upon the purse. Some dogs possess a singular knack of hunting out anything that has recently been in the possession of their masters. There is one ludicrous anecdote of this faculty, which we fear is too good to be true. A gentleman made a bet that his dog would identify a franc that he threw down upon the Boulevards at Paris. Before the dog had discovered the money, a passenger picked it up. Presently the dog caught the scent, followed him to his hotel, remained with him all day, and attended him to bed, to the great delight of his newly constituted master, who was extremely flattered by his sudden attachment. But the

moment the gentleman pulled off his small-clothes, in the pocket of which he had placed the franc, the dog barked at the door as if desirous to go out. The door was opened, the dog caught the breeches, and rushed away to his rightful master. Shortly afterwards arrived, all *dashabillz*, the owner of the breeches, trembling for a purse of gold that lay in the same pocket with the important franc. The dog is not always upon the side of the aggrieved. There is no weapon of defence which cannot be converted into a weapon of attack, and so it is with an animal that can be formed to any thing at the pleasure of his master. Highwaymen have accordingly taught him to aid them in their violence, and pickpockets to filch from counters, and seize reticules in the streets.

Edwin Landseer happily called the Newfoundland dog 'a Distinguished Member of the Humane Society;' and he has richly earned the tribute that has been paid to him by that happy genius. His element is water, and his business to rescue those who are not at home in it as himself. This propensity of his nature is sometimes carried to a laughable excess. There was a Newfoundlander at Paris that would not even suffer that any one should bathe. He promenaded along the banks of the Seine, plunged in after the swimmers, and encumbered them with his help. While he was allowed to go at large no one could enjoy the luxury of a bath without being forcibly hurried back to land. Hence his officious zeal requires no stimulus when the danger is real. Nor is it a mechanical impulse. There have been instances in which he has summoned assistance when he has been insufficient by himself, or when no one was at hand to recover the object of his care. He counts his own life nothing in his generous efforts. He will make an attempt to carry a rope from a sinking vessel to the shore, though the sea rages to a degree that renders it impossible for him to stem the tide.

There is no sacrifice of which a dog is not capable on behalf of his master. The dread of fire is overwhelming with animals, and yet, (as we have already seen,) he has been found occasionally to brave the flames. It Libourne, in France, in 1835, one of the townsmen gave an old suit of clothes to dress up an effigy. His dog happened to be by when it was burnt, and taking it for his master, he jumped upon the fire again and again to tear it away, biting those who attempted to retain him, and would have been burnt to death unless his master had appeared.

Devoted to his master in life, the dog mourns him in death. There are few fields of battle which do not present him watching and moaning by the side of a master that has fallen in the fight. Wordsworth has consecrated a poem to the fidelity of the animal who was found whining over the skeleton of a traveller who had perished in the mountains of Cumberland three months before:—

'How nourished there through such long time
He knows, who gave that love sublime;
And gave that strength of feeling great
Above all human estimate.'

Still more affecting is the fate of a dog related by Daniel in his 'Rural Sports.' He belonged to a magistrate who was thrown into prison during the French Revolution. Denied admittance to the dungeon, he waited day after day at the prison gate, till he won upon the affections of the jailer. Put out every night, he returned every morning. He attended his master through the scenes of his trial and death, and accompanied him to his burial-place. At the end of three months he refused to eat, and began to dig up the earth which separated him from the being he loved. His strength declined as he approached the body, he shrieked in his exertions to complete his task, and expired in the midst of his convulsive efforts.

Much has been written to demonstrate that the dog can even attain to the comprehen-

sion of the ordinary conversation between man and man. Gall declares that he had often spoken purposely of objects which might interest his dog, taking care not to mention his name, or make any intonation or gesture which might awaken his attention, and that he showed by his behavior that he understood what was said. Lord Brougham says that a most accurate and literal person gave him an account of which the substance was that his shooting-dogs discovered by what they heard that he intended to go into Nottinghamshire on the following day. A mother asked her boy to fetch his sisters clothes, and on his refusing peevishly, she said, to reproach him, 'Oh, Mungo will fetch them;' and the dog immediately executed the commission. We agree with Lord Brougham that these instances of presumed interpretation of our language are probably due to the microscopic eye of the dog for what passes around him, though, as he justly remarks, this only illustrates the more how well animals can profit by experience, and draw correct inferences from things observed by them. Where the words are addressed immediately to himself, it is not difficult to determine that he collects their purport either from the introduction of some well-learned phrases, or from the tone and action which accompanies them. To take an example which at first sight appears to support the higher view of the understanding of the dog. M. Blaze having one day lost his road, a peasant offered him his dog to escort him to a certain house. 'Take the gentleman,' he said, turning to the animal, 'to such a place, but don't go in, mind you, and come back directly,'—then to M. Blaze, 'I tell him not to go in, because he would fight with the other dogs.' The dog did as he was bid, conducted M. Blaze to the house and returned to his master. Here it is clear that the house to which he was sent was a familiar word like his own name, and equally clear that he had been often scolded for venturing within its precincts, and embroiling himself with his kindred, so that he would readily comprehend the scope of the prohibition from the monitory voice with which it was uttered. It was certainly a beautiful display of docility; but as regards the capacity of a dog to catch the meaning of words, it proves nothing more than that he attaches ideas to a few customary, well-defined, and expressive sounds. He would seem, however, to have an accurate sense of the lapse of time. That he distinguishes Sunday is nothing. Everything wears such a different aspect that he might identify it at a glance. But he is also conscious of the recurrence of any other day of the week. A dog that belongs to the brother of Sir Thomas Wilde, runs away on the Saturday night, and remains from home till the Monday morning, in order to escape being chained on Sunday. Southey says, in his 'Omniana,' that he knew of a dog which grew up with a Catholic, and was sold to a Protestant, that would never eat on a Friday. His grandfather had one which every Saturday, (the killing day of the week,) went a couple of miles to pick up offal at the butcher's shop. A bull-dog mentioned by M. Blaze, who was accustomed to go on the same errand, kept to the propitious hour, as well as the day. This dog was always present at family prayers, and when the last *Pater* was commenced, he got up and stood at the door, that he might be ready to go out at the instant it was opened. We suspect that he was instructed here by a slight movement in the circle, or by a variation in the pitch of reading; and not, as M. Blaze infers, by his ability to count the number of *Paters*. The dog also recognizes colors. Prisoners have written letters, according to M. Blaze, on yellow, red, or blue paper, and sent them by their dogs, who knew by the tint to whom they were addressed. It is certain that the dog with a little training makes an excellent messenger. Mr. Kirby mentions in his *Bridgewater Treatise* that one that was accustomed to carry packets to a house went to the kitchen to be fed when he had deposited his charge, and, as soon as he had done, appeared barking at the parlor window, to give notice that he was ready to return. Some have gone so far as to knock at the door, or ring the bell. The

Spanish writer quoted by Lord Brougham, says that a friend was wont when he called to leave his mastiff at the door of the house, and the animal, in imitation of his master, pulled the bell in order to get in. The dog of a shop-keeper, who ran in and out of the street-door during the week, had always recourse to the knocker on Sunday when it was shut. Priscilla Wakefield, who tells this anecdote, adds two or three more of the same nature. M. Blaze knew a dog whose habit was, not to ring the bell, but to answer it. He regularly followed the servant from the kitchen to the door, and the visitor from the door to the parlor. In his old age, becoming too deaf to hear the sound, he took up his quarters where he could see the bell, that by watching its motion he might continue to know when anybody called.

The dog possesses the to us incomprehensible instinct—in common, however, with other animals,—of finding his way by a road that he has never traversed. Mr. Blain tells of a dog that was sent by sea from London to Scotland, and escaped back to the metropolis by land. Boisrot de Lacour, a French writer on the chase, took a terrier from Rochefort to Paris, and though the dog made the journey in a carriage, and slept all the way, he returned when he was liberated, to his former master. Once again he borrowed a hound of a brother sportsman, who resided at a considerable distance; the next day, when he was let out to hunt, he slipped away and ran off home, not, as was discovered, by the road he had been brought, but in a straight line across flood and field. M. Blaze calls this instinct a sixth sense, of which we can frame no sort of idea. ‘Experience, however,’ he continues, ‘demonstrates that it exists. The camel conducts his master three hundred leagues through the sands of the desert, where there is no track to guide him. The pigeon carries letters through the pathless air. The birds of passage born in Europe emigrate to India; and, what is remarkable, travel ordinarily without their parents, who have made the voyage before. The horse finds his road across the snow; and probably all animals have the same faculty.’ On the other hand, an extraordinary circumstance, related by Dupont de Nemours, in a memoir read before the French Institute, can only be attributed to the effects of intelligence. The dog in question was the property of a shoe-black at Paris, whose trade he sustained by dipping his paws into the mud and soiling the shoes of the first person that passed along. If the pedestrian continued his progress, he dirtied the next; if he stopped to have the mischief repaired, he remained quiet till his master was at leisure for a fresh customer, and then the game recommenced. He was purchased by an Englishman, enchanted by his cleverness, and taken to London. He contrived to escape, went to the inn where the coach that brought him put up, followed it back to Dover, and, after crossing in a packet-boat to Calais, again placed himself in the wake of a carriage, which pioneered him to Paris. One habit of dogs, that of deserting a town an hour or two before an earthquake, which is frequently ascribed to some strange and unaccountable instinct, depends simply on their every-day perceptions. The rumbling sound strikes their quick ears before it is heard by any one else, and scares them away. In our observation of the dog, we seldom attach sufficient importance to the fineness of his senses. They are so acute that a sleeping dog knows whether he is touched by his master or a stranger, remaining quiet in the first case, and growling in the last.

Whatever opinion may be formed of the sagacity of the dog on particular points, it is impossible to deny that he possesses faculties in addition to those which we ordinarily call instinct. We have no intention at present to plunge into the thorny discussion of the precise extent of his intellectual powers; but we feel assured that no one can follow the dog through the several phases of history, and not acknowledge in the words of Gaston Phœbus, which M. Blaze has taken for his motto, ‘That he is the most noble, most reasonable,

and most knowing beast that God ever made.' And, as all his rare endowments have been dedicated to man, there is no animal in creation that has a stronger claim upon our gratitude and love. M. Blaze, whose affectionate earnestness for the welfare of the dog, is the great charm of his book, would extend his care beyond their lives, and erect monuments to their memory. A great poet, whose feelings are always warm and true, has supplied the answer in a tribute to a dog whose death he lamented, and whose 'name' he 'honored':—

Lie here, without a record of thy worth,
Beneath a covering of the common earth!
It is not from unwillingness to praise,
Or want of love, that here no stone we raise;
More thou deserv'st; but this man gives to man,
Brother to brother—*this is all we can.*

But, if we raise no stone, the epitaph of the dog has been written in many splendid eulogies. M. Blaze has added one more to the number, which we think is not unworthy to stand beside the best:—

'The dog,' he says, 'possesses, incontestibly, all the qualities of a sensible man; and, I grieve to say it, man has not in general the noble qualities of the dog. We make a virtue of gratitude, which is nothing but a duty; this virtue, this duty, are inherent in the dog. We brand ingratitude, and yet all men are ungrateful. It is a vice which commences in the cradle, and grows with our growth; and, together with selfishness, becomes almost always the grand mover of human actions. The dog knows not the word virtue; that which we dignify by this title, and admire as a rare thing—and very rare it is in truth—constitutes his normal state. Where will you find a man always grateful, never ungrateful—always affectionate, never selfish—pushing the abnegation of self to the utmost limits of possibility; without gain, devoted to death, without ambition, rendering every service—in short, forgetful of injuries, and only mindful of benefits received? Seek him not—it would be a useless task: but take the first dog you meet, and from the moment he adopts you for his master, you will find in him all these qualities. He will love you without calculation entering into his affections. His greatest happiness will be to be near you; and should you be reduced to beg your bread, not only will he aid you in this difficult trade, but he would not abandon you to follow even a king into his palace. Your friends will quit you in misfortune—your wife, perhaps, will forget her plighted troth; your dog will remain always near you—he will come and die at your feet; or, if you depart before him for the great voyage, he will accompany you to your last abode.'

LANDSCAPE GARDENING IN NEW-ENGLAND.

BY GEO JAKUES, WORCESTER, MASS.

I venture to offer for publication in the Horticulturist a few hints, having a somewhat local bearing upon the subject of landscape gardening.

It is not my purpose to dazzle your eyes with any light of mine, hitherto hidden under a bushel, but rather to provoke your criticism.

The art of embellishing the grounds of a country residence, holds a very high rank. Compared, indeed, with its productions, there is no work of man approaching so nearly a semblance to the creative power of his Maker. Of all earthly pleasures, this claims to be

the most fascinating, while it acknowledges itself capable of becoming the most ruinously expensive.

Although modern writers recognise two grand divisions or styles of this art, the *geometrical* (or ancient) *style*, and the *natural* (or modern) *style*; yet here, as in other fine arts, we find many variations and modifications, or schools of style; as, for instance, where the laws of taste are made to conform to the more stringent code of convenience, economy or utility.

Probably more of this prevails in New-England than elsewhere; for here, more than in other lands, utility has become one of the secular deities of popular worship. In this section of the country, whenever a contest takes place between economical advantage and good taste, the latter is sure to find some apology for making a hasty retreat.

It does not concern us at present to inquire what *may* be done with a dual revenue of half a million pounds sterling, as at Chatsworth, in England, or with an almost princely fortune upon the shores of the Hudson. With scarcely an exception, here, in New-England, operations in landscape gardening are, and are likely to be, hemmed in by limits so narrow as almost to exclude the applicability of the term. From a half acre to some seven or eight acres, is the utmost extent of territory that a genuine Yankee, though a millionaire, will consent to appropriate to merely ornamental purposes. Even after having forced himself to acquiesce in such like "wasteful" embellishments, he does all the work grudgingly, counting, (and if a profane man, cursing) the cost, at every step that his labor progresses.

Again, the taste of New-England people generally, for the beautiful and picturesque in rural scenery, is either vitiated, or totally uncultivated. Hence, the great mass of the people prefer symmetry, stiff formality, straight lines, and the geometrical forms of the ancient or artificial style of laying out grounds. Nearly all our first class places in Yankeeedom, are so arranged. Another evil arises from a vulgar proneness to an ostentatious display of riches. And as costly architecture strikes the careless eye more forcibly than scenery, the man ennobled by quickly acquired wealth, plants his gorgeous palace upon a bleak and bald site, of which the 'surroundings' would be admirably in keeping for a hovel. The whole strength of the proprietor is spent upon house and furniture. Meanwhile the brassy glare of things provokes criticism, and men find themselves incapable of concealing their disgust at three striking incongruities,—the house itself, the flaunting ignorance of the *animate nature* within it, and the meagre nakedness of the *inanimate nature* around it.

Some of these places afford a ridiculous exhibiton of the proprietor's insane passion for symmetry. A gate or a tree here, another there; the second obviously designed for no other purpose than to match, or geometrically balance the first. And so of every walk, and of every shrub or flower, throughout the place. Every angle is a stiff right angle; every row is formal and straight; every plant of a row equi-distant, of equal form and equal size. A certain starchy smartness seems to preside over the whole place. Everything is so prim, so square, so sharp, we almost expect to see the house leap from its foundations and fly away. All seems to have for its object a display of the power of art, or rather the superiority of quick-made wealth, to the wisdom which guides the operations of nature. Such, or similar, have ever been the efforts of the infancy of taste.

Many of our country seats have been planned by the wives and daughters of the proprietors. These estimable ladies, full of that confidence which ignorance inspires, piquing themselves on their exquisite taste in matters of interior decoration, imagine that they are equally competent, (perhaps they are!) to guide and direct the embellishment of out-door

scenery. To this source we may trace trees paired off like vases upon a mantel-piece; walks laid out like the entries and passage-ways of a dwelling-house; garden plots with little circles in the middle, suggestive of the idea of a center-table in a drawing room, &c., &c.—all evincing an uncultivated, childish taste, which ever delights in the lowest forms of beauty, preferring whimsical conceits, unmeaning and ridiculous combinations, rather than the infinitely varied, but always graceful manifestations of nature.

In regard to that class of country residences of which the ornamental grounds consist of less than an acre, it is difficult to say much upon paper. Such small places require to be managed with great skill. Into their narrow limits, regular forms will almost force themselves. Lines of walks and trees seem almost to claim to be straight; and it is only by the exercise of patience and skill, that the appearance of art can be concealed. Yet even here, the necessity is not entirely absolute. A refined taste can do much to give an air of natural beauty to a very small residence, particularly where the genius of the place is favorable.

A gracefully curved drive or walk, (from the public street to the buildings,) entering through an irregular group of trees, and forced into its curvature by another little group, will of itself impart to a rural home charms far more pleasing than ten times their cost could infuse into the stiff, old straight-lined primness of the ancient style.

So where a fine cluster of half a dozen elms, oaks, chestnuts, or other beautiful indigenous trees, grow near the sight of the house, the buildings may be located as it were, beneath the protection of these forest guardians, so that the whole place shall at once produce an effect which would otherwise cost the labor of years. Yet few New-England men understand this, and consequently all the beauty of the location falls beneath the axe, and JONATHAN "puts up" his shingle palace in their stead, while Mrs. JONATHAN fixes her admiring gaze upon its bleak and gawky proportions, and exclaims "*My gracious me!*"

Even so small a spot as half an acre, may be made one little snug home scene of rural beauty. Abandoning all ideas of a kitchen-garden, to men occupying such places, generally a thing of no *pecuniary* value, let the entire grounds be filled with groups of ornamental trees, and shrubs, and flowers, upon a ground-work of smooth grass. Let woodbine, honey-suckle and climbing roses, here entwine themselves around a column, and wreath themselves there over a window. Here place a rustic seat, half hid among the shrubbery; there lead a short walk, carelessly curving towards a little vine-clad arbor. How trifling the expense! The cost of a single article of extravagant furniture will defray it. How permanent and beautiful the result! How gratifying, not only to the occupant, but to the passing traveller! And more than that; for whatever tends to cultivate a refined taste, improves the heart, and elevates the better nature of man.

It is for lack of taste, and not on account of a want of room, or deficiency of resources, that we have so little of this in New-England.

Suppose a lot no larger than sixty by a hundred feet. Is it not capable of being made at a most trifling expense, to express features of natural beauty? Certainly; for a bit of green lawn, and one bold group of ornamental trees, will produce this. An eagle's nest on a rocky cliff may be highly picturesque, and yet, together with its surroundings, it costs less, and occupies more limited space, than the smallest habitation of man. A gigantic weeping elm, standing in front of a New-England farm-house, is but a single and not expensive object, while it gives a charm of graceful beauty to the whole place. It is not then, an inexorable law of nature that scenery must be extensive in order that it may be beautiful or picturesque. Taste in designing, skill in executing, are the requisites, and not altogether extent of territory or large pecuniary resources. And yet it is said, "every

man can best lay out his own grounds!" Equally well can every man be his own landscape painter, architect, or even tailor! Surely there can be no better evidence of incompetency than the honest utterance of this assertion!

But if so much can be done within such narrow limits, a great deal more may be expected from those residences where from one to five or six acres are appropriated for that kind of embellishment, to which we not altogether appropriately apply the term landscape gardening.

A man of refinement would in these days, scarcely tolerate a geometrical arrangement of grounds of this extent. Such places admit of a winding carriage-way, leading through a fine lawn studded with groups of trees, irregularly circuitous walks, bordered with various shrubbery; here and there a massive forest tree, standing in its full development singly upon the lawn; a summer-house embowered in the midst of a little retired grove; arabesque forms of flower beds occasionally inserted in the midst of the smooth green of a grass-plot; a ~~vase~~ ^{vase}, pretty even when empty, but better over-flowing with water, which it costs not much to bring in a leaden pipe from some neighboring hill:—such are among the charms which almost seem to make a little paradise of home.

We have far too little of this in New-England, nor can we hope for more until the popular taste shall be educated for it. It may, indeed, be said that such labors are extravagant and useless appropriations of money. Vastly more extravagant is it for a twenty-thousand-dollar man to build a ten thousand dollar house; and yet this thing has become common among us. Suppose such men to build five thousand dollar houses, and to expend three thousand in the surrounding scenery—how immensely different the result! and besides, two thousand dollars would then be left to silence the complaints of extravagance! Neither is landscape gardening a useless art. Its productions feast the eye of every passing traveller; they refine the popular taste, and thereby exert a silent and hitherto unappreciated influence upon the morals of society. They constitute a no mean portion of a nation's pride at home, and of her renown abroad.

We have arrived at the end of our sheet, and have just room left to express our earnest hope to hear more from yourself or others, upon this prolific and very interesting subject.

GEO. JAKUES.

Worcester, Mass., Nov. 1851.

REMARKS.—Our correspondent is severe upon New-England taste, and he is partly just and partly unjust. Partly just, because no where does one see so many snug houses belonging to persons of moderate means, the proportions of which are so faulty, and the accessories so rigidly wanting in grace, as in many parts of that portion of the Union; partly unjust, because the country villages of New-England, with their beautiful avenues of elms, and their republican air of rural order and adornment, afford evidences of taste far above that of the rural towns of the rest of the country.

We suspect the truth is, that the majority of the New-Englanders have given the subject less thought than in any part of the country. Whatever the New-Englander bestows thought upon, grows into new life under his hand. But there are much fewer examples of good taste in gardening and architecture, set by men of large wealth in New-England, (if we except the environs of Boston,) than in New-York or Pennsylvania, while there are more houses built, and places laid out by working-men of small means there, than in any other part of the country. If we could establish a school in every considerable town in New-England, next year, where *drawing* should be taught to artisans and mechanics—we would undertake to promise that the whole taste of the country should be revolutionised in ten years. The building of all the cottages of New-England is, at the present time, al-

most solely in the hands of carpenters, nine-tenths of whom can neither draw, nor understand a drawing. When, therefore, a person presents a country carpenter in New-England with a design for a cheap cottage, of a form superior to, or different from, the stereotyped *bastard pediment* style, so common all over New-England, the latter immediately says,—“Oh! that is a very *dear* style of cottage. But I will build you one like deacon C.’s, which is ten feet larger each way, for \$200 less.” This, of course, decides the proprietor of moderate means, who is ignorant of the true state of the case, to build in the *bastard pediment* style. The truth is, the carpenter has the latter by heart, and knows to a dollar what he can do the job for. The other he has only a vague idea of—and would lose money on, from experimental blunders of all kinds—though not a farthing dearer in itself. Knowing this fact by heart, (by constant contact with it,) and knowing also, how superior to any other mechanic a Yankee carpenter is, whose thinking and working faculties have been educated—we long for the time when the common schools of New-England shall do something more than common. If they would only teach drawing, taste would just as sure follow, as spelling follows the alphabet. It is impossible for man or woman, however well he may *think*, to express his ideas on paper, (or in houses and grounds,) in anything better than hard lines and “pothooks,” till he has learned how to make the mental and the material correspond.

ON THE WOOD-PRODUCING FORCE AND THE SEED-BEARING FORCE, IN VEGETABLE LIFE.

BY L. YOUNG, SPRINGDALE, KY

ACCORDING to the received doctrines in Botany, in the case of exogens, a wood or leaf bud in development, forms an axis or branch with its appropriate leaves, arranged in an order peculiar to each genus; each leaf, in its foot stalk, being furnished with an inner and an outer set of ducts and vessels, which vessels, in the course of a growing season descend by extension to the roots; the inner set upon the smooth, cylindrical surface of the alburnum; the outer, (if Lindley’s notions of the proper office of cambium be true,) upon the inner surface of the bark; the annual deposit of wood and bark lying between these inner and outer ducts and vessels. In time, during the season’s growth, anastomosis takes place in the axilla of every such leaf; a new wood bud is formed and installed upon the apex of the bundle of vessels, woody fibre and bark, which, originating in the foot stalk as before stated, has already descended by extension to the roots.

In this way, every wood bud is in a state of direct communication with the roots, ready by vitality and capillarity, to pump up supplies of food for the formation of still other leaves and branches—destined in their turn, still farther to increase the vigor and size of the trunk and roots. A fruit bud is a metamorphosis of one of these wood buds; “it is a wood bud excited into growth; but which, in growing, elongates neither upward nor downward.” It is obvious then, that being seated in connection with vessels extending to their roots, the fruit bud pumps for itself food from the general circulation, but not extending downwards in growth, it has no chance by which to send succor and strength to the stem and roots. The fruit bud is, therefore, a sort of parasitical plant, living at the expense of the wood system, and as it is generally expressed, in a state of “antagonism with it.” To the practical cultivator, it is a matter of secondary interest whether this metamorphosis result from some innate power peculiar to the life of plants, as the learned

Dr. LINDLEY supposes—or is brought about by some outward circean agency everywhere present, and ready to act, under proper conditions, as the luminous ray of the compound sunbeam, which is the theory of a certain French philosopher.

But the propositions themselves, being admitted to be true, there are certain hints which may be drawn from them as corollaries, and which will prove instructive in a high degree, to the farmer, pomologist and gardener. Two of them I propose to consider briefly in the present article.

1st. That in exogens, which include most fruit trees, the normal place of the fruit bud is within the circuit of circulation, and that generally, its appearance at the extremities of leading branches, is an evidence of over-fruitfulness and disability, if not disease.

2d. That as from organization, the fruit spur system is supported out of the general circulation, upon the principle of parasites, and maintains what is termed “the *balance of power*,” by absorbing just so much of the general circulation as prevents over-luxuriant growth in the wood system—no more and no less: too great a diminution of the wood spurs has a tendency to over-stimulate the wood growth.

If we attempt to look around for evidences of the injury which trees and plants sustain, where fruit buds are allowed to take possession of the extremities of the main wood branches, and to cover the whole outer surface, we can hardly go astray, whether in the orchard or garden, especially when the plantations have been of long standing. Do we see the bearing branches of the gooseberry or currant bristling with thick and pointed clusters of fruit buds to their very ends? If so, it may be set down as a truth, that such branches are destined to perish at a day not remote. If again, we examine the pear and the apple, and find the whole exterior surface of the trees covered with fruit buds and fruit spurs, such a state of things is evidence of present debility, or a most pregnant sign of its speedy approach; indeed whole families of fruit trees (heavy bearers generally,) are sometimes seen to blight in this way—the wood system being stifled and supplanted by these parasitic spurs, and only re-appearing amid the dying throes of the tree, under the shape of “water-sprouts,” in the body and large branches of the tree, where they break out in clusters, not unlike those present in the peach tree when affected with “yellows.”

If one were skeptical of the doctrine of botanists, that fruit buds add nothing to the wood system, it would be quite easy to remove such doubting by a little personal examination of trees upon which the fruit bud system is developed in great excess. Numberless examples might be found of branches not larger than rye-straws, terminated by fruit buds, showing unerringly an age of three or more years, while such branches themselves show no increment of wood over and above the annual ring of the first season's growth; in fact, in such cases, the order of nature seems inverted, and instead of that taper growth from the trunk upward and outward, which marks and makes beautiful a tree in health, those fruit spurs go on enlarging and multiplying, until the thickening and bloated masses of debility darken and almost obstruct the view.

In illustration of the second point proposed, I shall draw largely upon individual experience, and hope that I may state, without being thought presumptuous, that my fruit crops, for some years, have presented a uniformity of appearance which has led some persons, and especially the less experienced, to suppose the result ascribable to the possession on my part, of some secret in the art of cultivation. I hardly need say that such is not the fact, and that I have never based a hope upon any other foundation than good culture, aided by a practice in pruning and training, conducted in accordance with the natural habit of each genus. But in efforts to acquire a knowledge of these natural habits, (which knowledge constitutes in part the science of pomology,) I have, after having endeavored to avail my-

self of all the light shed upon this subject by others, sometimes perpetrated egregious errors, and perhaps I never committed an error more egregious in character, or more expensive in its consequences, than one in relation to the nature of this very fruit bud system, or spermogamous force. I term this error expensive, because in adopting a practice of pruning the peach and pear in conformity thereto, I lost a large part of the general crop in several bearing years, *for the want of bloom*.

Anterior to about the period 1847, I was, when growing fine fruits, in the habit of thinning the crop by removing a large portion of the fruit spurs with the fruit attached, leaving only those bearing the specimens intended to be ripened, and with the peach particularly, by way of *monsterizing* individual fruits, I reduced the whole count to a very small number upon certain young trees, nor was this practice abandoned till I saw branches of bearing trees, thus treated, running up into a nursery growth, the "*tout ensemble*" of which branches resembled more a thicket of young trees than a well proportioned individual tree. Indeed I have been more than once mortified to see fruits treated thus, and from which so much was expected, come to a perfect stand still; the whole crop of certain individual trees, ultimately writhing, growing yellow and dropping without maturity, whilst the buds of the current season would swell and burst into active wood growth.

These fruit spurs being in the nature of parasites, possessing and enjoying supplies of food obtained at the expense of the wood system, exist in a state of antagonism therewith, and holding forcible possession of the power to feed upon the general circulation, they must exist in such numbers, collectively, as will enable them, as a system, to keep in check the wood-growing force, the constant tendency of which is to a monopoly of the whole circulation, and to a growth of over luxuriance. Although it is a maxim generally received as a truth, that in sharing out any given stock of supplies, the fewer the distributees the greater the distributive share. The functions performed by the fruit-buds collectively as a system in this case, qualified the applicability of this maxim. When I thinned the crop by removing the spurs up to a given point, the operation might be salutary; further diminution disturbed the balance of power, and diminution carried to extremes stimulated the wood growth to a luxuriance which for a time suspended the development of fruit buds of a healthy character.

Although my remarks concerning the nature of these two forces have been confined to exogens, it by no means follows that a knowledge of them in other families of plants is either unattainable or useless. Such knowledge is not unattainable, since among cereals any experienced farmer will in early spring, long before the wheat plant has shot into culm, and as far off as the eye can discern colors, pronounce upon the promise of any wheatfield for a crop abounding more or less in straw or grain, as the dark green of luxuriance or the more subdued tints of moderate vigor happen to prevail; nor is it useless, since thereby a definite object is set before us and we have only to seek for means suitable to accomplish it—and it is somewhat remarkable as well as gratifying to the advocates of book-farming to notice the harmony in principle which prevails in the prescription of LONDON, the highest English Agricultural authority, for converting an over-luxuriant wheatfield into productiveness, and that of Monsieur CAPPE, French Pomological authority quite as high, for changing an over luxuriant wood branch into fruitfulness—the one would rob the plants of their blades in April by "*cutting them off with sheep or even horses*;" the other would "*pinch early the soft extremities of the shoots on vigorous parts*."

I have thought too that Mr. DOWNING's strawberry problem would admit of solution on this principle. Many varieties tending, in a rich light soil, to that obesity of luxuriance

which is imbecility, are kept in moderate vigor by compelling the roots to labor for a living amid pounded soil, which is to them the being pastured on "short commons."

Springdale, Ky., 1851.

L. YOUNG.

REVIEWS.

HEAT AND VENTILATION; general observations on the Atmosphere and its Abuses, as connected with the common or popular mode of heating public and private buildings, together with practical suggestions for the best mode of warming and ventilating.
Rochester, D. M. DEWEY, Arcade Hall.

BELIEVING, as we do, that *the intemperance of breathing bad air*, is a national curse in America, which is, at the present moment, hurrying a thousand-fold more victims annually to the grave, than any other species of intemperance, we hail with pleasure any symptoms of awakening attention to the condition in which so many millions of our countrymen voluntarily pass so large a part of their lives.

The work whose title we have just named, is an unpretending pamphlet of 59 pages, published by D. M. DEWEY, at Rochester. It is mainly occupied with a very simple and clear statement of the necessity to the health of the human system, of pure air, and some system of ventilation in our dwelling houses. The wholesale system of poisoning men, women and children, daily going on all over the country, by tight coal stoves, and wherever one travels in cars and steamboats, by little "salamanders" of red-hot iron, and wherever one goes to a crowded lecture room or place of public amusement, by the continual heating over of the poisonous carbonic acid gas expired from the lungs—these are the topics which the author of this pamphlet, like ourselves, and others who have handled this subject, dwells upon, with wonder that intelligent beings can overlook their importance. If there is any "infernal machine" in America, it is *a close stove that becomes red hot*. We have preached from this text—(and we believe not without some effect, since we notice a stove-maker in Ohio advertises a ventilating stove, expressly intended to obviate the objections we have urged,) and we hope the press everywhere will take up the crusade, until this cursed invention to poison the pure air of heaven is utterly banished from the land. We shall quote for the benefit of our readers, what the author of this pamphlet has to say about the matter:

"But when we reflect upon the fact, that throughout the whole country, as soon as fuel becomes a little scarce, the open fire place in any and every form, is pretty generally closed to give place to the stove; we meet an evil which has been growing upon us for the last quarter of a century to an alarming extent. It is, however, true that in large towns, particularly where coal is easily obtained, the open grate in the best class of houses is quite generally used. The business of stove-making in most of the large towns in this State and throughout the country, has become quite the leading branch of manufacturing. Any one who will take the trouble to visit such establishments in Albany, Troy, Utica, Syracuse, Seneca Falls, Rochester, Lockport, and Buffalo, will, if unacquainted with the business, be astonished by the number which are annually turned out from these various establishments. The infinite variety, the taste and skill displayed not only in their external appearance, but in their fuel-saving qualities, demonstrate that the demand must be almost unlimited. The venerable Dr. NOTT, of Union College, and Prof. OLMSTEAD, of New-Haven, and many other intelligent gentlemen, have devoted a great deal of time, labor, and practical philosophy to the invention of stoves which would give off the greatest

amount of radiant heat with the least quantity of fuel. In this they have been very successful, and, if *warming* a room in this form, were all that its inmates required, mankind would be under lasting obligations for the philanthropic efforts of these distinguished scholars. From the tenacity with which they have adhered to their several models, one would suppose they were entirely unconscious of the consequences of introducing such a fuel-saving apparatus into a close room without any means of ventilation. Although the Germans, Russians, and French formerly excelled us in their construction of stoves, we are probably quite equal to them at the present day. The poorer classes in Germany and Russia, probably make their houses much closer than ours, and exceed our people in saving all the heat generated. In Russia, the great mass of the population exclude the external air in cold weather as far as possible, and they much prefer to respire the vitiated air to any admission of cold air, for the simple purpose of improving the atmosphere of their rooms.

"Among the poorer classes, fainting or asphyxia is, by no means, uncommon, and all their rooms have that close, unhealthy smell which is so common among those who live in underground cellars in our own large towns and cities. With such an atmosphere as this and common as it is among the Russians, we need not wonder that Cholera remains among them during winter, while in cold weather in other countries it ceases. Although many of the most scientific men of the present day—several of whom are of the medical profession—have depicted in the strongest language, the injurious and oftentimes fatal consequences of this mode of heating buildings; still very little attention is given to their warnings. Within the last two or three years, many of the most distinguished writers of the age have written volume after volume, upon the necessity and feasibility of ventilating our dwellings. The great mass even of intelligent and educated persons seem to be unaware of the disease, pestilence, and death, so often resulting from the use of what is called the "tight air-stove;" and the manufacturers of the article are making as many preparations for the continuance of the demand as though their wholesome qualities were as well established as the elegance of their various designs and patterns. It is a very common thing for persons who are abundantly able to secure all the comforts of life even in profusion, and construct a dwelling-house in strict accordance with all the modern improvements in domestic architecture, to leave out entirely the fire-place, and in its stead have a small circular opening, six inches in diameter, to be closed perfectly tight during summer, and opened only in winter; to receive the smoke-pipe of a fuel-saving salamander, which shall admit no more air than is barely sufficient to support the combustion of the fuel. He will avail himself of the skill of the architect, to make all his windows and doors perfectly tight, and as the cold weather approaches, he will oftentimes invite his neighbors in to spend the evening socially, and at the same time demonstrate by the small amount of fuel which he uses, that he has the best stove and the warmest dwelling in town. Indeed, the whole company will soon testify to the fact that the room is really warm—so warm that they are inclined to leave early in the evening, and if the same persons should frequently visit similar establishments, they would soon come to the conclusion, that going out on evening visits is very unwholesome—a species of dissipation which ought to be abandoned. The owner of such an establishment, as the one alluded to, is generally far from being parsimonious, and very likely fond of giving sumptuous entertainments, and in all his intercourse with his family and society may manifest the most generous feelings, and show his liberality in a thousand acts of kindness and benevolence; but did he know the consequences upon himself, family, and friends of his heating apparatus, its fuel-saving qualities would have very little influence upon him. We are fully aware that to those

who are very poor, and find it hard in cold climates to secure fuel enough to keep themselves warm—the tight air-stove is perhaps the best thing for them under such circumstances, which can be introduced into their humble abode. But in such rooms as they are generally obliged to occupy, they suffer much less for the want of ventilation than those who live in houses where all the windows and doors are so nicely fitted, that the external air is entirely excluded. In many of the coal-stoves which have lately been introduced, the coal burns so slowly, that the carbonic acid gas, which is generated (being half as heavy again as the atmospheric air,) cannot ascend through the smoke-pipe and chimney-flue with the temperature which is generally maintained a few feet from the point of combustion. Dr. Ure, one of the most scientific writers of the day, says that “carbonic acid gas cannot ascend at the temperature of 250 deg. F.” but regurgitates into the apartment through every pore of the stove, and poisons the atmosphere. “I have,” says he, “recently performed some careful experiments upon this subject,” and find that when the fuel is burning so slowly in the stove as not to heat the iron-surface above the 250th or 300th degree of Fahr., there is a constant deluge of carbonic acid gas from the ash-pit into the room. “I shall, (he says,) “be happy to afford ocular demonstration of this fact to any incredulous votary of the pseudo-economical, anti-ventilating stoves now so much in vogue. There is no mode in which the health and life of a person can be placed in more insidious jeopardy than by sitting in a room with its chimney closed up with such a choke-damp—vomiting stove.”

“We could quote language and facts of a similar character from a great variety of the most reliable authors, but if we can induce any of our readers to observe the consequence in their own dwelling of these modern machines, we shall have gained more than by simply inducing them to peruse these opinions, however reliable they may be. In most of our churches, public halls, school-houses, court-rooms, places of public amusement, offices, stores, work-shops, &c., we meet in this section of the country, the same unwholesome atmosphere; and almost the only variety to be observed in the mode of heating the room is in the *form* of the stove. If you enter a public hotel, the first thing you meet in the office or bar-room (if in winter,) is a large box-stove. If you go to the dining-room, you meet the same thing again, with perhaps a hundred feet of smoke-pipe crossing the room at different points; and the offensive character of the atmosphere gives you a sense of fullness in the head, while perhaps a disposition to vertigo compels you to leave the public rooms and retire to the one allotted to you. Then you will probably find a neat little elegant gothic pattern red-hot by way of showing you a little variety, and if you are compelled to lower a window for your relief, and wake up at midnight with a severe cold, you may console yourself with the fact, that your beautiful little stove is of the latest and most approved fashion, and consumes less fuel than any one ever before invented. If you stop long in the place, and stay over the Sabbath, and have been properly educated, you will of course go to church, and it is your own fault if you do not find one of beautiful proportions, handsomely finished, and elegantly decorated. The stove will be larger than the one at your hotel, and one will be placed in each corner of this splendid edifice. The sexton will fire up as often as is necessary, and keep you perfectly warm. It is true the air may soon become very disagreeable, and the eloquent voice of the speaker sound dry and husky; if he cannot relieve it by moistening his vocal organs quite frequently with cold water, you may not be at all pleased with its tones, silvery and agreeable as they were at first. But do not blame him. He is suffering for the purpose of keeping the audience *perfectly warm*, and if you see a considerable proportion of the congregation asleep, particularly if the house is *full*, do not wonder at it, for the atmosphere

has been so thoroughly dried and respired that there is not oxygen enough remaining to give them the ability of keeping awake. If now and then a delicate lady near you faints away, help her out as quick as possible into the fresh air. You need not send for a pitcher of fresh water to throw in her face. The pure unadulterated atmosphere is abundantly sufficient to restore the circulation, though she may suffer some time afterwards. This kind act being performed, you can return again to the church much invigorated. If after this experience you come to the conclusion that all these difficulties are caused by the use of a close stove, you need not mention it to others, for they have heard of it before. If your own house is warmed and ventilated according to modern notions, you may perhaps congratulate yourself in leaving the town. In the railroad cars, you expect to get into a different atmosphere, but as soon as you enter, you will only find a different pattern of stove made *expressly for railroads*. The passengers may insist that every window shall be kept closed, and you have no alternative but to remain a victim to the foul pent up air which is so common under such circumstances, until you reach the end of your journey.

"We have spoken thus freely of the use of the common box and tight-air stove, and did we not know from experience and observation, and were we not supported by the highest medical authority, and most unequivocal chemical tests, that the evils resulting from their general use far exceed any and all of our allusions, we should hesitate as to the propriety of attacking a system which is so universally adopted. We know that many persons have their houses so constructed, that it is difficult for them to make any change in this department of their domestic arrangements. But if we shall be successful in inducing those who have seen and felt the evil effects of heating their houses, without any reference to ventilation or the quality of the atmosphere they inhale at every breath, they will be the better prepared to appreciate the improvements which have lately been introduced. In some parts of the country, several attempts have been made to introduce a kind of stove which will warm a current of fresh air directly introduced from the outside. It is impossible to ventilate a room by drawing off the foul air without introducing a corresponding amount into the room from some source. If cold air be introduced for the purpose of ventilation, all the warmed air will pass off through the ventiduct, and the cold air remain. We need hardly say that, under such circumstances, it is impossible to make a room comfortable. To overcome this difficulty, a ventilating stove has lately been introduced in different parts of Europe and in some of the eastern towns of this country."

The pamphlet is filled with suggestions and explanations relating to the best mode of ventilating and warming, much of which we have published in the "Country Houses"—but which we trust will meet a wider circulation in this form. If a million of copies could be circulated in the United States, it would be an immense and incredible saving of health to the people at large.

Bad air is a "slow poison." That is the trouble. People go on taking it into their lungs day after day, and night after night. They grow pale, their lungs suffer, the circulation is languid, they take colds readily; the chest, the stomach, the skin, become disordered, and a host of chronic diseases attack them. A little carbonic acid taken every day don't kill a man. It is almost a pity it did not! If a red-hot stove destroyed, instantly, one man in every town daily, for a week, there might be some salvation for the nation. If instead of fainting away in crowded and badly ventilated public assemblies, people occasionally died outright in convulsions, the authorities would take the matter in hand, and make it penal for the owners of such buildings to open them for public use without attending to the proper conditions for the preservation of health. When a thing is only a "slow poison," the age is too much in a hurry to attend to it.

In such cases we must wake up the public lethargy by facts. And here is one of them. We have before us the History of the Dublin Lying-in Hospital. Some years ago, this building, erected in the common way, without the slightest regard to ventilation, was found to exhibit a great amount of mortality among the young children born there. In four successive years—healthy seasons too—out of 7,650 infants brought forth in the hospital, 2,244 died within the first fortnight after birth, of convulsions, or what the nurses call nine-days fits. These children foamed at the mouth; the jaws became firmly closed; the face swelled and assumed a purplish hue, as though they were choking. "This last circumstance suggested to the physician that a deficiency of wholesome air was connected with the great mortality." Air pipes were immediately contrived; the various rooms were well ventilated. What was the result? That in the three following years, out of 4,243 children born in that hospital, only 165 died. In the very same rooms, too, where, according to the old ratio, before the ventilation took place, the number of deaths to that number of children, would have been 1,632. To save the lives of more than 1,400 human beings in three years, by merely putting in a few pipes! Can any one say there is nothing in ventilation, after such facts as these?

Foreign and Miscellaneous Notices.

FOREIGN GARDEN GLEANINGS.—(ST. PETERSBURGH.—**FLORISTS.**—Among the different florists of St. Petersburg, M. Alwarch, a German, stands first. He cultivates nothing but those plants which are universally sought after in Russia, viz: good evergreen shrubs and bushes. These plants, which are brought into Russia in pots, are sold in large quantities to the nobility, who, in winter, and the commencement of the fine season, use them for the internal decoration of their houses. We may mention more especially *Gardenia florida*; *Ixora coccinea* and others; *Lantana*; *Musa*; *Aschy. nanthus*; *Asclepias curassavica* and *Iloya carnosus*; *Echinum*; *Gesnera*; all of which are cheaper in St. Petersburg than in Paris. Such is not the case with the hundred-leaved, crested, four-seasons, and Belladonna Roses, which, when in flower, fetch 2s. 6d. and 5s. The Myrtle-leaved and Chinese Orange trees are also very dear, as are also *Pelargonium*s and *Fuchsias*. *Franciscea odorata*, and *Hopeana*, are great favorites; *Begonias* and *Gloxinias* cost half as much again as they do in France. *Camellias* and North American *Azaleas* fetch most extravagant prices. The same gentleman has a large collection of *Rhododendron ponticum* maximum, and other species; but we look in vain for out-door *Azaleas*, *Calceolarias*, from Chili, or Cacti from Tropical America. As for Myrtles, Pomegranates, Laurels, Jasmines, climbing Roses, Dahlias, Pinks, and Spanish Jasmines, they are rare and costly.

Besides evergreen shrubs, M. Alwarch cultivates, though upon a smaller scale, out-door shrubs. We principally noticed some bushy plants, capable of resisting the severe frosts of

the country, such as *Cornus mascula*, *alba* and *sanguinea*; Elders; *Spiræa lævigata*, *rosea*, and *ulmifolia*; common Lilacs; *Chamaecerasus*, *Snowdrops*, *Snowberries*, *Service trees*, *Sweet Chestnuts*, *Pteleas*, *Poplars*, especially the true sweet-scented *suaveolens*; *Caragana*, with which beautiful undulating hedges are made; the charming red-fruited *Acer tataricum*; *Buckthorns*, and particularly the one from Tartary, which constitutes a large part of the live hedges in the country; lastly, *Crataegus purpurea*, with its handsome foliage, far surpassing in color that of *Cr. alba*. The latter plant attracted my especial attention; its beauty, the rapidity of its growth, and other excellent qualities, enable the Russians to make live hedges, which we should very much like to see introduced into our own country.

FLOWER MARKETS.—One of the first things which strikes a stranger entering St. Petersburg, is the evident passion which all the inhabitants, rich and poor, old and young, have for flowers.

The eye admires, with surprise and delight, the halls and rooms of all classes, which, for eight or nine months in the year, are more like conservatories than the interior of common dwelling-houses; being gay with plants of every clime, whilst out of doors the country is desolated by the severity of the cold. In-doors we find Palms and Figs, *Musas*, *Dracenas*, *Marantas*, the large leaved *Arums*, *Camellias*, *Rhododendrons* and *Azaleas*; also some beautiful *Leguminosæ*, *Mimosas*, *Cytisus* in pots, Myrtles of all sorts, *Olea fragrans*, the large *Clethra*, different sorts of Laurel; and lastly, but most conspicuous, are the hundred-leaved and four-

season Roses, Hyacinths, and other flowering plants.

The working classes, who cannot command a wide range of temperature, prefer such plants as *Crinum*, *Maranta*, *Iloya carnosia*, *Asclepias curassavica*, and *Lantana*; Oranges, *Jasmines*, *Plumbago capensis*, *Ixora*, *Laurel*, *Cytisus* and *Olea fragrans*.

The poor, who are compelled to live continually in the town, grow *Pelargoniums*, *Roses*, *Verbenas*, *Fuchsias*, *Wallflowers*; and, in spring, *Lilies of the Valley*.

FLOWER TRADE IN ST. PETERSBURGH.—A fair, which is held as soon as the frosts are over, and which lasts a whole month, viz: from the 25th of May, to the 25th of June, is almost exclusively a flower fair; it is at this fair that the nobility and country gentlemen make their purchases for decorating their country houses, to which they are about to retreat. The flowers are supplied almost entirely from Germany. We remarked the hundred-leaved and four-seasons Rose, planted in a sort of hamper; Cherry, Apple, Plum, Service, and Sweet Chestnut trees, a few Pear trees, all shrubs, and selling for double what they do in Paris; the *Lilies of the Valley*, especially, seemed to bear a most exorbitant price. We saw, too, *Paeonies*, and all sorts of perennial and shrub-like plants.

Flowers are sold, too, by travellers, who go from house to house, carrying upon their heads boards upon which the flowers in pots are closely packed. But these pedlars offer their purchasers neither variety nor beauty, a few *Wallflowers*, *Pelargoniums*, *Fuchsias*, *Lilies*, *Echinm.*, *Gesneras*, *Roses*, *Mignonette*, *Cinerarias*, *Verbenas*, *Phlox*, and *Justicia*, form the whole of their collection.

Although there are many more florists in St. Petersburg than in Paris, the collections of the former are much more meagre than those of the latter. Their trade in bouquets, and flowers in pots, is prodigious, far surpassing what we had imagined.—*Masson's Report*.

QUERCUS AGRIOLIA, A HARDY EVERGREEN OAK FROM CALIFORNIA.—A few miserable living plants of this species were sent home by Hartweg from California, and are now beginning to grow in the Society's Garden. It will probably be a hardy evergreen tree, concerning which Nuttall, who knew it in its native country, has the following remarks:—"This species, almost the only one which attains the magnitude of a tree in Upper California, is abundantly dispersed over the plain on which St. Barbara is situated, and, being evergreen, forms a conspicuous and predominant feature in the vegetation of this remote and singular part of the western world. It appears more sparingly around Monterey, and scarcely extends on the north as far as the line of the Oregon territory. It attains the height of about 40 or 50 feet, with a diameter rarely exceeding 18 inches; the bark is nearly as rough as in the Red Oak. The wood, hard and brittle and red-

dish, is used only for purposes of fuel, or the coarse construction of log-cabins. As an ornamental tree for the south of Europe or the warmer States of the Union, we may recommend this species. It forms a roundish summit, and spreads but little till it attains a considerable age. As a hedge it would form a very close shelter, and the leaves, evergreen and nearly as prickly as a Holly, would render it almost impervious to most animals. The leaves vary from roundish ovate to elliptic, and are of a thick rigid consistence; the serratures are quite sharp; the young shoots are covered more or less with stellate hairs, and for some time tufts of this kind of down remain on the under side of the midrib of the leaves, which are, however, at length perfectly smooth, and of a dark-green above, often tinged with brownish yellow beneath. The stamiferous flowers are very abundant, and rather conspicuous; the racemes the length of three or four inches; the flowers with a conspicuous calyx and eight or ten stamens; the female or fruit-bearing flowers are usually in pairs in the axils, or juncture of the leaf with the stem, and sessile, or without stalks. The cup of the acorn is hemispherical, and furnished with loose brownish scales; the acorn, much longer than the cup, is ovate and pointed. We do not recollect to have seen this tree properly associated with any other, except occasionally the *Platanus racemosa*; their shade is hostile to almost every kind of under-growth. By Persoon this species is said to have been found on the eastern coast of North America, while Pursh attributes it to the north-west coast, about Nootka Sound. It does not, however, extend even to the territory of Oregon, as far as my observation goes." Nee says, "I have only seen branches collected at Monterey and Nootka. The leaves of the young plants are perfectly smooth when first developed, of a thin consistence, with numerous sharp dentures beneath; they are of a brownish yellow color, and appear smooth and shining." The long narrow acorns, almost conical, are a remarkable feature in the species. *Journal of the Horticultural Society*, vol. vi., p. 157.

ARTIFICIAL BREEDING OF FISH.—As the amusement of fly-fishing is one which holds a first place in the opinion of every one who understands it; and as the trout and the salmon are the only fish which afford genuine sport to the angler; and as I believe that the latter, in the southern counties of England, is nearly extinct, whilst the former is there far from being abundant; I wish to call the attention of such of your readers as are possessed by the true piscatorial *furor*, to the facility with which these fish can be bred artificially; and as many experiments have been made by my directions, and I have witnessed the results, I beg to say that there is no fear of success, if due care is taken. The experiments of Sharr, Agassiz, &c., have proved that fish can be bred artificially (the experiments of Boccia I have not yet

tried, although he professes to arrive at the same results in another manner); and acting on the plan recommended by them, I have known both trout and salmon bred by thousands for the last 10 years; and as now is the time for the experiments to be made, I hope that those who intend to try the plan will lose no time in looking after their supply of breeding fish.

To begin with trout: catch as many as you can conveniently obtain upon the spawning beds* and examine them carefully one by one, to see that the spawn and milt are in a fit state for exclusion, and also to enable you to separate the males from the females. If they are in a fit state to be operated upon, which may be known by the facility with which the milt and the roe run from them, on a slight pressure, squeeze the milt of the males into a little water. When you have obtained all the milt you can get, add so much water that the mixture remains slightly opalescent; say about equal in color to a table-spoonful of milk mixed in a quart of water. Pour this into a deep dish or bowl, large enough to hold the largest of your female trouts. Take one of these, put it into the water so prepared, and gently squeeze the roe from it, whilst overhead in the water.† Do this as quickly as possible and return the fish into fresh water, and then pour off the water containing the impregnated roe, through a strainer, carefully preserving it for the remaining fish, and immediately return the roe into fresh spring or brook water. Repeat the operation for every female trout, and you will then have a quantity of impregnated roe, which, if properly managed, will hatch with great certainty. Have ready as many boxes as you are able to stock with spawn, made 3 feet long, 2 feet broad, and 6 inches deep; fill them two inches deep with river sand, so well washed that there is not a particle of mud left in it, and upon that put two inches of gravel, also exceedingly well washed, and varying in size from a hazel nut to a pigeon's or pullet's egg. These boxes must be so placed that the water from a spring will run into the first, and from the surface of that into the second, &c.; and below the whole nest of boxes, there ought to be a small reservoir made, say three yards by two ditto, and 18 inches deep, and well gravelled at the bottom; all these things having been previously arranged, and the water flowing nicely over the gravel, sprinkle the impregnated roe equally over the surface of the gravel, say a

quarter of a pint to each box, and it will roll down the interstices of the gravel, and find a bed in which it will remain snugly until the spring, then, about March, if all has been properly managed, you will find, on a careful examination, that the young trouts are coming to life by hundreds.

I am very particular in recommending a spring, rather than a brook, for several reasons; in the first place, brooks are liable to be flooded, and are sometimes so overcharged with sand, mud, &c., that the gravel in the spawning boxes is completely choked with it, and the spawn is lost, as I know to my great and frequent disappointment; at other times all is washed away together. In the second place, the gravel of brooks swarms with water-lice, and the larvae of aquatic flies, as well as bullheads and loaches, all of which prey upon the spawn of both the trout and the salmon; and in the third place, if you place your spawning-boxes in a brook, it is difficult to prevent the escape of the fry when hatched, and you are left in doubt as to the success of your experiment; with a spring all these inconveniences are obviated, but if your water-course should contain water-lice or aquatic larvae, it is a very easy matter to destroy them before putting in your boxes, with a little quicklime. It is also desirable to cover your spawning boxes with a wire grating, and also to protect them in severe weather from the chance of being frozen. When they begin to hatch, open a communication between the boxes and the little reservoir below, and if this communicates with a water course, in which aquatic plants are growing, so much the better; the fry as soon as they are strong enough, will make their way into this ditch, and will find an abundance of food among the water plants; from thence they ought to be able to make their way into the brook, river or lake, which it is intended to store with them; but all ducks, wild and tame, should be driven from this ditch, or there will be few trouts allowed to find their final place of destination.

The above rules, with some modifications, are applicable to the breeding of salmon as well as trout, the only difference being in the mode of placing the female fish. The salmon is too large a fish to put into the vessel in which the diluted milt is placed; but I think it desirable that she should be held by an assistant in such a manner that the tail and lower part of the body, up to the vent, are immersed in the water containing the milt; it is also very necessary to hold her firmly, otherwise a large fish, in the struggles it makes to get free, is apt to upset the vessel containing the milt, and then the experiment is at an end; at least for a time; being held firmly by the assistant as above, the belly of the fish must be gently pressed by the hands, to promote the emission of the spawn, which on emission must be gently stirred in the water, to bring every grain of it into contact with the milt; but do not allow it to remain longer in that liquor than a minute, as I have found that if the diluted milt is too strong, or if the ova

* I have frequently found, when catching trout for this purpose, that the milt and roe were not ready for emission. When this was the case, I enclosed the fish in a wire cage, which I immersed in water, examining them every week, until I found they were ready for the experiment.

† I fancy that if the ovum come in contact with the air on emission, that they are not so readily impregnated as if they are kept covered with the water until the impregnation has taken place, and therefore I wish to lay some stress on the desirableness of thus keeping the air excluded. The milt remains in an active state long after emission, but I have great reason to suppose that this is by no means the case with the roe.

remain too long in contact with it, they become opaque and never hatch at all, apparently because they are over impregnated. In the ordinary way in which salmon and trout are bred, the milt must be largely diluted with water, and the contact between the milt and the ova can only be momentary; for the streams in which these fish spawn (particularly salmon) are so rapid that the milt on exclusion must be carried away immediately.

I am quite aware that there is another theory which assumes that impregnation takes place 12 months before emission; but a very careful examination of the spawnings of minnows and lampreys (I have never been able closely to examine the spawning of the salmon,) convinces me that it is not a correct one; besides, did any one ever succeed in hatching the ova of fish which had not been allowed to come into contact with milt after exclusion; if they have, when—where—and how was it accomplished, and where is it recorded? I know that I could never succeed, although I have often tried the experiment; on the other hand, it is the easiest thing imaginable, with due care and a suitable situation, to hatch those that have been properly impregnated after emission. But if I admit, to avoid argument, that this theory is correct, it will not interfere at all with the artificial breeding of trout and salmon; on the contrary it would materially facilitate it. It would only be necessary to catch a female fish, with the ova ready for emission, and place these ova in clean gravel, in a box, as before described; but there would be no occasion for males. T. G. *Gard. Chron.*

BLANCHING CELERY.—This year I adopted the following plan with my Celery, which has answered extremely well. I planted it in a trench and left it to grow to its proper height; I then drew each plant through a circular drain tile, and stopped the top of the tiles with moss, and leveled the ground; in less than three weeks

* There is, however, one fact which would almost lead one to suppose that the ova are impregnated 12 months before emission. It is this,—the male par (salmon fry,) are at this season full of milt, and almost ready for emission; whilst in the females, the ova are so small, that they require a microscope to see them individually, and the whole ovary is merely like a thread: either the milt of the male is not required to impregnate the ova of the female, or the ova are impregnated long before emission, for the ova of the female par evidently requires many months to bring it to maturity; but my opinion is, if a female salmon were to ascend a river without being accompanied by, or meeting with a male, that the ova would be impregnated by the male par, which always swarms about the salmon spawning beds; and the experiments of the Duke of Buccleuch's game-keeper (Sturw.) tend to prove that this is the fact—the same excess of males may be desirable that exists in a bee-hive, where there are, at least, a thousand males for one female.

afterwards they were beautifully bleached, quite clean, and came in earlier than in the old way. The drain tiles are very inexpensive, and they do not harbor slugs, &c.—H. M.—*lb.*

HORTICULTURAL EXHIBITION AT PARIS.—I went to the show of the Societe Nationale d'Horticulture de la Seine, on Saturday, the 27th of September. It was held in a very large tent, pitched over one of the fountains in the Champs Elysees. I observed several, (what I thought) improvements in the way of conducting this fete. It lasted four days; my visit was on the second day, when certainly everything was fresh, and by the crowds I saw entering on the third day, it appeared not to have lost any of its attractions. Not only were fruit and flowers exhibited, but also vegetables, artificial flowers and fruits, ornamental flower pots, gardening instruments, miniature drawing-room and boudoir fountains, for keeping bouquets fresh, and even some singing birds and gold fish. The show of green and hot-house plants was very inferior to ours, but there was great beauty and variety among the common flowers, such as *Asters*, *Dahlias*, &c. Among yellow *Picotees*, we have nothing equal to show in England. The grounds of several were brighter and deeper colored than ours, with much more variety in the color and marking of the edgings. Indeed, if a little more regularity of shape could be obtained, some of them would be very striking flowers. Why cannot we have in England, as they have now (Oct. 2) at Paris, abundance of *Strawberries* and *Artichokes* in all the markets? What struck me most was the great profusion of fine ripe *Pears* exhibited. While we can only obtain two or three good kinds at this season, there are at least eight or ten at Paris. L. H. *Ipswich.*—*lb.*

EXPEDITIOUS GRAPE GROWING.—Seeing, by the report of the last meeting of the Horticultural Society, that my brother has succeeded in fruiting and ripening wood and fruit of the Black Hamburgh Grape from eyes struck in February last, I beg to state that I have got good bunches and well-swelled berries of *Muscot of Alexandria*, on vines struck from eyes in March last. The vines were not stopped at 15 inches high, as his were, but at eight feet, consequently the fruit is produced on the laterals. I would particularly recommend those about planting vineries, if they have the convenience, to strike their own plants in February or March, and plant them out in May or June. Some which I have treated in this way here in our new vineries, surpass two-year old plants planted in April. R. *ELPHINSTONE.* *lb.*

Domestic Notices.

DESIGN FOR A DISTRICT SCHOOL-HOUSE.—We present our readers, in the *FRONTISPIECE* for this month, a design for a District School-house. It has at least the merit of simplicity in the plan, and as it is a parallelogram, of economy in construction. An entrance hall, or lobby, opens into a large school room for boys, upon one side, and one for girls on the other. Between these two rooms is a recitation room, which may contain a book case for the school library.

The exterior is bold and picturesque—the style a modification of the Swiss—and well adapted to many sites in our varied rural scenery. The widely over-hanging eaves afford a species of veranda shelter round the whole building.

This style is exceedingly well adapted for a wooden building, and its details are so simple that any country carpenter of intelligence could construct such a school-house without any further working drawings.

As we look upon the rural-church and the district school-house, as contributing more essentially to the architectural education of the country at large, than any private buildings, we hope, by presenting from time to time, various good models, to assist in banishing the present deformities, which pass by these names, from the face of the rural districts.

UNIVERSITY OF ALBANY.—We have great pleasure in calling the attention of our readers to the prospectus of the *course of lectures on Scientific and Practical Agriculture*, by Professor NORTON, which is to commence under the care of the University of Albany, on the second Tuesday in January. The lectures for the course are fixed at the low price of \$10, and there are few farmer's sons, belonging to the *thinking class*, who would not reap great benefit from attending these lectures. In the absence of any state institution for Agricultural Education, the new University wisely takes the initiatory steps, by inviting Prof. NORTON—one of our soundest men of science in this department, to commence with a practical course of lectures in which the application of chemistry

to the culture of the soil, will be especially considered.

GREEN-HOUSES IN WINTER.—Dear Sir: Very few persons appear to know the value of the *sponge* in a green-house. I mean for the purpose of washing the leaves of all those plants with leaves broad enough to admit of it. I took the hint some five years ago from a neighbor, the most successful plant grower I ever had the good fortune to know. His plants were always so especially fresh and healthy, that I was for a long time puzzled to understand his secret, and he always declared he had no secret. But early one morning I caught him with a pail of clean water, slightly warm, by his side, sponging off the leaves of all his choice plants. I said to myself, "I have it." I did more; I went home and practiced it. My plants soon showed by their new aspect, that I was not wrong in believing it the real secret of my neighbor's success. They began to look brighter, healthier, and grow and bloom better than my utmost care had ever been able to make them do before. And now, strangers always ask the same question when they see my plants, that I used to ask my neighbor. My answer is, "use the sponge." The pores of the leaf get filled with fine dust—and the plant chokes. Syringing does not wholly remove it; the sponge does. Yours, AN AMATEUR. New-York, Dec. 16, 1851.

NOTES ON PEARS, &c.—Dear Sir: I send you for publication a few notes on Pears, Plums, Horsechestnuts, &c. Having fruited a large number of pears the present season we naturally had a desire to test their merits, and in order to do so rightly, we took the Seckel, and Virgalieu, which are said to be the standards for quality, as the criterion by which they should stand or fall. Those of merit which were in season with the Seckel and Virgalieu [White Doyenne,] are as follows:

Beurre Moiret, St. Michael, Archangel, Bonne des Zees, Ananas and Doyenne Gaubant.

We grew a number of Seckels and Virgalieus on our own grounds on standard trees, and the

new pears above on dwarfs. I will not enter into a description of each, but will merely say, that my partners, Messrs. THORP, SMITH, HAN-CHETT, and others present, united with me, in the one opinion—namely: That they were all superior in flavor, &c., to either the Seckel or Virgalieu. Their size is fair and they are handsome pears. We have recommended these to all amateurs and friends, and have disseminated them largely. Our dwarf pear trees are very fine and vigorous, four years old and generally covered with blossom buds; their height from five to seven feet. Another pear ripening before any of the preceding, (about 1st of Sept.,) is the *Beurre Gaubault*. This proved to be this season, (with us,) a sweet, juicy and luscious pear, and well worthy a place in any collection, no matter how small. The *Ananas* will please those who are fond of the peculiar musky flavor of the *Seckel*.

In the June number of your Journal, I spoke of the *Montgomery plum*, and said that Mr. CARPENTER from whom I received it, called it the *Montgomery Prune*. He also called the other plum the *Groundacre*, and I gave each as his terms. He has sent out these two fruits over a large portion of Ohio, and particularly in *Fairfield Co.*,—under the above names. Thus you will perceive that I have not dubbed it "*Prune*" but gave Mr. C. as the author. In relation to the "*Gundaker*," I believe I have the credit of first noticing it in your journal, and if that notice has been productive of no other good, it has at least brought out its true name, which I am very happy to learn, as I hold in no little esteem the faculty some people possess of dubbing fruits with new names, as much as your correspondent from *Cincinnati* or any other person.

In the October and November numbers I discover that you have an article on the *Scarlet* and *Double flowering Horsechestnuts*. I am happy to inform you that we have each, and have sold considerable of them. The *scarlet*, flowered with us the present season. Our trees are from six to eight feet high and stocky. Yours, &c., A. FAHNESTOCK. *Syracuse, N. Y., Nov. 7, 1851.*

PROTECTING GRAPEVINES.—A. J. DOWNING, Esq.—Last fall I laid down my grapes in my vinery on the ground, pinning them down and covering them with loose straw. During the

winter the field mice got in and injured them, eating the bark from some of them for several feet, and otherwise injuring some of the finest of them.

Will you inform me what measures to take this winter, to prevent a similar occurrence, and how shall I lay them down and protect them. Yours very truly, S. K. WILLIAMS. *Newark, Wayne Co., N. Y., Nov. 11, 1851.*

If you fear the attacks of mice, lay your vines on the ground, and cover them with tan-bark. Ed.

BOTANICAL NAMES.—MR. DOWNING—Dear Sir: Will you be kind enough to answer through the *Horticulturist*, how such words as the following are pronounced. *Smithii*, *Fortunii*, *Dillwynii*, *Scottii*, &c.; and what is the difference between the above names, and those that end with one *i*, in pronunciation. H. H. WILLIAMS. *Cincinnati, Oct. 27, 1851.*

Ans.—A single *i*, final, is pronounced as *Stricta venti*, (pronounced *vent-eye*;) but when it ends a syllable not final, it has the sound of *e*,—as *Mimulus Smithii*, (pronounced *Smith-eye*;) *Daphne Fortunei*, (pronounced *Fortun-eye*;) &c.

AGRICULTURAL EDUCATION.—Dear Sir: The literary character of the principal editor of the *Evening Post*, gives importance to whatever he may write upon education, its means and ends. I enclose an article from his paper of to day, in reply to some other article recommending the establishment by the state, of agricultural schools, (only these) in imitation of Prussia. This reply, unnecessarily dragging-in the method of teaching, and political lessons taught, is just as applicable to all our schools. As well say have no common schools, no free academies, no colleges, because Prussia in her schools, academies, and colleges, teaches her children to be quiet subjects of an absolute government. It is a feint to conceal the true issue—to cover it with a prejudice—as if our farmers must be denied suitable means of instruction, because forsooth, Prussia teaches her farmers political submission with agriculture. To keep freedom's end equal then, we should provide equal means of instruction, and with the agricultural science, teach the doctrines of self and free governments. If I have read correctly of the course of instruction in the higher agricultural schools of

Prussia, it teaches nothing that a lover of the largest liberty need fear—no more dangerous absolutism than that of absolute obedience to the laws of physical science. (If I am in error you will know it.)

But it is to the latter part of his article I would ask your attention and rebuke: "*If agricultural schools are wanted in this state,*" &c. This is either a compliment to the existing state of agricultural knowledge, or an insult to the farmer. Really, it says to the farmer, that his occupation is so low that it needs not education, as provided to elevate and improve other professions. We know the editor values education highly; it is only the farmer—the clown in the country—that needs none, or if he discovers that he could work his farm to better advantage, with some other than mere intuitive knowledge, he must provide it for himself. Oh, I wish the farmers of New-York would make themselves heard this winter, not in the begging terms of a few, "pestering the next legislature," but in their strength, demanding to be placed in a position of equal privileges in the means of instruction, with the schools of Law, Physic and Divinity. It was to ask your rebuke to the tone and spirit of this article—the same that has damped every effort hitherto—that I enclose it. Your good efforts in behalf of agricultural education, are telling surely, though slowly, and gathering strength.

I am about leaving this city for Apalachicola, where I shall be pleased to obtain and send for you or your foreign friends, or others, any indigenous plants, seeds, &c., that you may wish, and that may be obtainable. Very respectfully, B. F. N. *New-York, 8th Nov. '51.*

We thank our intelligent correspondent for his timely notice of the leader in the Evening Post—which we reprint for the benefit of our readers.

THE EXAMPLE OF PRUSSIA.—In one of the morning journals, we perceive that the example of Prussia is adduced as one which we ought to follow in providing public instruction in agriculture. Prussia has, it is said, five agricultural colleges, besides ten schools of a more elementary character. She has seven schools to teach the cultivation of flax, two for showing how meadow-lands should be managed, one for instructing boys in the care of sheep, and forty-five model farms. We are asked to make Prussia our pattern in this matter, and the next legislature of the State of New-York is to be

pestered with plans for raising money to endow agricultural colleges.

In Prussia everything is done by the government. The government founds and regulates the universities as well as the common schools; the government provides for religious instruction, for the building of churches and the appointment and sustenance of the clergy. It does all this without asking the leave of the people; not for the reason that the people would not provide as well by voluntary arrangements for their own spiritual and literary instruction, but partly because it desires to have all the institutions of education, of every sort, in its own hands, in order that the pupils may be trained up in such a manner as to make quiet subjects of an absolute government; and, in the next place its policy is to keep the people from engaging in public enterprizes of any kind. For all undertakings which bear the least resemblance to political transactions, for every institution, of any kind, which has any influence on public opinion, the people are taught to look to the government. The government teaches; the people learn and obey—public business is made to the mass a mystery, with the transaction of which they are not to intermeddle, nor presume to discuss.

This is the sort of government whose acts are held up to the State of New-York as an example. We are to go on, if this class of politicians are allowed to manage our affairs, accumulating all manner of cares upon the government till the government agency has everywhere supplanted individual enterprise and activity, as it has in Prussia.

If agricultural schools are wanted in this state, if there is any better institution for teaching how to take care of sheep, and manage meadow lands, than the farm of one of our intelligent yeomen, there is none, the establishment of which by voluntary enterprise, is so easy. Any man who understands practical agriculture, with such a knowledge of the auxiliary sciences as are necessary for the present improved modes of cultivation, might establish a school, in which the pupils would pay for their instruction by certain stated service, which of themselves would advance their progress in the arts of tillage and husbandry. Agricultural schools would, in this way, be the most economical of all, and the scholar would be trained up, without expense, to the highest degree of practical expertness, accompanied with a competent degree of theoretical knowledge.

In this manner model farms might be established in every county. If there is a real demand for agricultural instruction in a formal shape, how does it happen that we have no institutions of this kind already established? If the demand for them was urgent and the people impatient, institutions on the frugal basis we have mentioned, would be founded all over the country.

The only conclusion to which we can arrive is, that there is as yet no call among the agri-

cultural population for the schools which the politicians who hold that the government is to do everything, wish to give them. When such a call is made, there will be hundreds of enterprising individuals prepared to offer agricultural schools on the voluntary system.

We are somewhat surprised to see the common-place view of agricultural education taken by the editors of the Post. We commend to their attention the Report of the Massachusetts Agricultural School Commissioners of last January.

A perusal of Professor HITCHCOCK's very able report on the various Agricultural Schools of Europe, inspected by him personally, will, we think, change their views. Prof. H. states, that the history of the Agricultural Schools of Europe teaches conclusively, that Agricultural Schools usually fail, if they do not receive efficient aid from the government. Also, that when the government takes *exclusive* control of the schools, (as in Prussia,) the people usually take little interest in them. And lastly, he tells us that "*those agricultural institutions succeed best which are started and sustained by the mutual efforts and contributions of individuals, or societies, and of the government.*"

The plain reason why some government assistance is needed is, that one of the principal objects is to try experiments—in order to ascertain the utility or worthlessness of supposed discoveries and improvements. Now a private school may be able to carry on a good system of farming—but a private school will always do what is most for the private interest of its principal to do—which is to raise only the most profitable crops—and not waste money in experiments. There are many branches of knowledge that would be highly useful for a young farmer living in a wheat district, to learn, that a private farm-school in a grazing district would not find it to its interest to teach; and there would be many branches of knowledge that the young farmer should acquire, which the limited means (as to teachers, apparatus, lectures, &c.) of the private school, could not compass—and in all these points the government would properly come in to the aid of the school. On the other hand, the young agricultural pupil should not be wholly supported and educated by the state—but should be obliged to pay something, either in money or labor, or both—in order that

he may feel that he has a direct interest in the maintenance of the institution.

It is, undoubtedly, but too true, that the mass of the farmers feel but little interest in agricultural education. But so it is with the masses in every calling at first. The few more intelligent, feel and see the evils of ignorance and the value and power of knowledge, and it is the few who always organize any such institutions. The common school system, which everybody recognizes as the great institution of this country, was not called for by the mass of the people—it was urged upon them with difficulty by a few of the more enlightened minds of the country. Its value once demonstrated, the people look with horror upon the mental darkness of an uneducated nation. So, if the value of agricultural, mechanical, and scientific schools could be once fairly demonstrated to the masses, they would at once be adopted, universally, as right sources of power and influence and wealth—in the same way as the printing press and the post office are so adopted. There can be no more real question about the value of special education to the farmer or the mechanic, in a republic, than there is of the value to these men, of the thinking faculty itself. If there is anything in agriculture or mechanics that makes any demand upon the thinking faculties of man, then those thinking faculties should be recognised and educated in the best manner for their special function. If there is not, why then let the brutes take the sole charge of the farms and workshops—it is idle for intelligent human beings to waste their time and talents there. The truth lies in a nutshell. Either farming is an intelligent occupation and demands education, or it is not, and demands only brute force. Take which ever form of the dilemma you choose—farmers, editors, legislators!

ASHES vs. CURCULIO.—Dear Sir: Having read much in your valuable and ever welcome journal relative to the curculio, I thought I would give you a statement which I heard made by a person who has grown the plum with success several years, relative to his treatment of the tree to prevent the ravages of the "turk." It was this: when the tree is full in the blossom, and early in the morning when the dew is on, to throw common wood ashes all through the

branches and over the tree. One application to each tree was sufficient, and had entirely freed his trees from the Curculio. I give this to you for what it is worth, and you can make such use of it as you choose. Yours, J. HACKETT.

THE WILD ORANGE OR CAROLINA LAUREL.—Dear Sir: I send you a parcel of seed of a beautiful evergreen, known among us as the wild or mock Orange. I infer that it is a stranger to you, from having never seen it noticed in your journal. Perhaps, however, you may know it by some other name—if so, you will identify it by the sprig of leaves, and by the fruit, a small glossy black drupe, which I enclose.

At the south we have many noble evergreens, but not one which will surpass it either for elegance or form, or for denseness or beauty of foliage. It is a universal favorite, and, though from the abundance of prussic acid which is found in all parts of the tree, it is supposed to be poisonous, it is found in every garden. I have never heard of a serious accident from it.

It has this peculiarity that it bears the shears well. I have seen it trained from the ground in the proportions of the pyramidal cypress: and again kept as a border-edging, though when left to itself, it will attain a height of forty or fifty feet, with a trunk of from nine to eighteen inches in thickness. As a screen, too, it is at once handsome and impervious to the sight. I believe it would withstand your vigorous winter climate well, for here it thaws through a thick coating of ice, with as little apparent damage, as any deciduous tree of them all.

You will observe that they are enclosed in an oil-silk bag, which will suggest to you the propriety of planting them immediately. First, however, soak them for about twenty four hours in water, as this is always done by those who succeed with it best. I have stripped off the pincaps, a precaution which makes them generally a sure crop.

Hoping that you will excuse the liberty I have taken, and that the seed may reach you safely, I am, very truly, &c. O. *South Carolina, Dec. 5, 1851.*

Our correspondent will receive our thanks for the acceptable present. The evergreen is the *Cerasus Caroliniensis*—nearly related to those beautiful evergreens, the English laurel

and the Portugal laurel—which are the ornament of almost every European garden. It should be called the Carolina laurel—as it has no affinity with the orange. We regret to say that it will not stand the winters here, as we have proved by trial. We think it will be hardy at Baltimore, and we have sent the seeds to Washington to be planted there, where this tree will be very ornamental. Ed.

THE VICTORIA REGIA IN THE U. STATES.—We copy the following interesting account of this superb water lily, and Mr. COPE's successful culture of it, from Dr. EMERSON's admirable address before the Delaware Horticultural Society.

The horticultural triumph, of which I have attempted to give you a short description, as it has been recently achieved in Europe, with the aid of the science, skill, and wealth there so abundant, has been promptly repeated on this side of the Atlantic by Mr. Caleb Cope, President of the Philadelphia Horticultural Society, with whose company we are favored on the present occasion. When it is considered that in Europe, the aid of princely munificence has been called into requisition in obtaining the first successful developments of the *Victoria Regia* at Chatsworth, Kew, and Zion House, the horticultural feat accomplished by our tasteful and spirited fellow-citizen, must be the more highly appreciated. The eclat of Mr. Cope's achievement is only equalled by the kindness he has displayed, not only towards his personal friends, but the public at large, to all of whom his superb conservatory has been freely opened. More than this, many Horticultural Exhibitions have, like the present, been supplied by him during the blooming period, with flowers and leaves of the *Victoria Regia*, which has greatly extended the gratification furnished by a sight so perfectly unique.

On the 21st of last March, Mr. Cope planted in seed-pans four seeds obtained from England, through the kindness of Sir Wm. J. Hooker. Three of these grew, and one of the plants was, on the 21st of May, transferred to a circular basin about twenty-five feet in diameter, enclosed in a glazed house erected expressly for the purpose. There it has been kept in water maintained at the tepid temperature of 76° to 85° Fahrenheit. The depth of water in the tank or basin is about two and a half feet, and the oozy soil at the bottom, into which the roots of the plant expands, is about the same depth. It is worthy of notice that the first leaves produced did not exhibit the turned-up edge, or salver-shape, which contributes such an uncommon appearance to the plant, until about twenty-four had grown. Ever since that period the leaves have been salvered as quickly as they expanded. The development of a leaf, on first

raising to the surface of the water, presents a most curious sight, not easily described. Rolled into a body of a brownish color, and covered with thorny spines, it might readily be taken for some large species of sea-urchin. The under side of the leaves, as well as the long stems, by which the flowers and leaves seem anchored in the water, are thickly covered with thorns about three-quarters of an inch long. On the 21st of August, just five months from planting the seed, a flower was developed, and the success of the interesting enterprise thus fully crowned.

As yet Mr. Cope has brought forward only one of the three plants produced from the four seeds. But this has continued not only to keep his tank, large as it is, always covered by its immense leaves, some measuring six and a half feet in diameter—many of which have from time to time been removed and replaced by fresh ones—but also furnished two flowers a week since the first blooming. Some of these flowers have measured seventeen inches in diameter. The petals always open early in the evening, and partially close about midnight. During the daytime, therefore, the *Victoria Regia* is seldom seen in fullest splendor, unless when removed from the parent stem.

If the development of the leaves of the *Victoria Regia* present such a singular appearance, the successive movements or changes in the flower are not less extraordinary and far more beautiful.

The crimson bud, which for several days has been seen rising, at last reaches the surface and throws off its external investment in the evening, soon after which the flower petals suddenly unfold, the expanded blossom, like a mammoth magnolia, floating upon the surface of the water, decked in virgin white, and exhaling a powerful and peculiar fragrance which has been compared to the mingled odors of the pineapple and melon. On the morning of the second day another change is observed and the outer petals of the flower are found turned backward or reflexed, leaving a central portion of a conical shape surrounded by a range of petals, white on the outside but red within. A slight tint of pink is discernible through the interstices of these petals, which increases as the day advances. In the evening, about five o'clock, the flower is seen to be again in active motion preparatory to another production. The white petals, which were reflexed in the early part of the day, now resume their original upright position, as if to escort their gay colored companions surrounding the central cone to the limpid surface below. After this the immaculate white of first bloom changes to gay and brilliant pink and rose colors. Finally, a third change ensues, marked by the spreading of the petals further backwards, so as to afford the enclosed fruitifying organs liberty to expand. These are soon seen to rise, giving to the disk of the flower a peach-blossom hue, the stamens and pistils at the same time assuming a figure

not unlike that of the old regal crown of England. On the third day the flower is nearly closed. All the petals seem suffused with a purplish pink; the coloring matter, which was originally only seen in the centre, having apparently penetrated the delicate tissues of the entire flower.

The leaves exhibited here do not belong to the plant which produced the magnificent flower before you, but were taken from a garden tank in which Mr. Cope has brought forward the lily under glass, without the assistance of stove-heat. It is true this lily has not yet bloomed, but the fine development of leaves gives reason to believe that, with the aid of a warmer sun than they have in England, the *Victoria Regia* may be brought to perfection in this country, even without artificial heat. In order to give it every advantage, it will still be necessary to start the plants in seed-pans placed in hot-beds, or heated conservatories.

In concluding this brief account of the *Victoria Regia*, I may observe that to German and French scientific explorers of primeval forests, is due the honor of first discovery and description, whilst to British activity and perseverance we are indebted for the introduction of this great floral prize into England, from whence it has been brought to our own country. Mr. Cope has succeeded in his first experiment, in producing the *Victoria Regia* with larger leaves and flowers, than any yet reported as having been raised in Europe. In his conservatory floats the Queen of Flowers in all her beauty, attended by her natural but strange-looking subjects, the orchids, suspended around in groups, and mingling their fragrance with her own. In fact, the whole scene presented in the lily-house is unique and highly impressive, well calculated to awaken poetical conceptions, among which it is easy to imagine a shrine consecrated to an oriental goddess, or grotto dedicated to water-nymphs, and presided over by *Ægle*, the fairest of the Naiades.

RANDOM NOTES ON PEARS.—A few observations made during a short visit to some of the eastern gardens, may prove interesting to the fruit-growing readers of this journal.

BLIGHT.—A remarkable fact, and throwing some light (negatively,) on the pear blight, is the entire absence from this disease among the trees in the neighborhood of Boston. It seemed indeed strange to hear such men as the president and ex-president of the world-renowned Horticultural Society there, inquiring for the appearance and symptoms of the blight as of a disaster personally unknown to them, but so universally known and dreaded in Western New-York and in Ohio. Boston and Rochester are not dissimilar in temperature of climate, hence we cannot trace it satisfactorily or wholly to the weather. Nor is rapid growth a necessary cause, for more freely growing trees than the thousands on the grounds of M. P. WILDER, S. WALKER, or C. M. HOVEY, are nowhere to

be found. A part of Col. WILDER's grounds consist of reclaimed bog, with an ample addition of improving and fertilising materials; and the finest pear grounds belonging to President WALKER he stated had been very heavily dressed with yard manure, with additions of ashes and guano, and the whole repeatedly plowed, and repeatedly subsoiled, till mellow and rich in a high degree to a depth of about two feet. The growth of the trees fully corroborated his account. Limited observations at Philadelphia indicated a somewhat similar condition of the trees at that place.

PYRAMIDAL PEARS.—The finest collection, perhaps, in this country, are the 1500 pyramids of HOVEY & Co., at Cambridge, some of them 10 feet high. The pear crop proving this year mostly a failure, but few of them were loaded with fruit; but the beauty of their training, as presented in the long avenues of these trees, could scarcely be surpassed by CAPPE's celebrated trees of Paris. These were mostly, like CAPPE's, on pear roots. Equally handsome specimens were observed on some parts of Col. WILDER's grounds.

NEW PEARS.—Of the newer varieties which have been considerably proved, none appear to be more generally admired than the *Doyenne Boussock*. for size, growth, productiveness and quality. We have never heard a word against its high character. The *Beurre Langelier* is regarded by HOVEY as the best early winter pear, and is highly esteemed by MANNING, WALKER, and others; while on the other hand, MANNING thinks the Lawrence is decidedly the best, so far as a partial trial will indicate. Col. WILDER finds the *Doyenne gris d'Hiver Nouveau* of good quality, and ripening later than *Easter Beurre*; the *Hovell* large and fine; the *Triomphe de Jodigne*. "good;" *Nouveau Poiteau*, handsome and fine; and *Soldat Laboureur* a beautiful grower and a fine pear. *Van Mon's Leon le Clerc*, as elsewhere, cracks badly with him, and the *Dix* very badly. Some of the worst looking specimens of cracked pears observed anywhere, were on a tree of the *Dix*. Has this new and hardy American tree already reached old age? Or will it die of old age at Dorchester, at the same time it is flourishing in youth and vigor near Rochester? A puzzling fact in relation to cracking, occurred on the grounds of the writer,—a young *Doyenne* pear on *new ground*, while bearing its first crop, became dotted with black specks, precisely like those of leaf blight, on both leaves and fruit at the same time, and the fruit cracked and was worthless. This was some years ago, and has not been repeated. Not far distant, on very similar soil, stood another old *Doyenne* tree, bearing yearly six to twelve bushels of uniformly fair fruit. This fact is very adverse to the theory of *exhaustion of soil* by trees of long standing.

ROBERT MANNING has found only two of Knight's pears of much value, the *Eyewood* and *Moccas*. The *Monarch*, after a vast amount

of pains to get it correct, proves after all, of no great value. *Manning's Elizabeth*, he regards as one of the finest early pears. The *Duchesse d'Orleans* promises to become very valuable. Of Gov. EDWARDS' new sorts, the *Calhoun* proves the best, and the *Dallas* a good fruit; the others not so worthy of notice.

STANDARDS ON QUINCE.—Those sorts which grow freely and endure well on the Quince, as *Louise Bonne* of Jersey, *Angouleme*, *Glout Morceau*, &c., may be set out in orchards and trained standard height. Specimens thus treated, more than twenty years old, bearing usually several bushels a year, were observed in a fine condition in the gardens of S. WALKER and M. P. WILDER. The *Langelier* and *Boussock* promise to be good for this purpose.—J. J. T. in Cult.

AGRICULTURAL JOKES.—*Punch*, in the following, wants to put the new reaping machine to a novel use:

Mr. Punch presents his compliments to Mr. Hussey, and hearing that his reaping machine is the best for corn-cutting, will feel obliged by one being sent immediately, as he wishes to cut his own corns. Mr. Punch would not have troubled the celebrated American *Hussey*, but his own wife, *Judy*, is such a lazy hussey that she will not perform the operation required.

An enlightened agriculturist out West, thinks the best way to make farmers grow Madder, is TO POKE 'EM WITH SHARP STICKS!

PENNSYLVANIA HORT. SOCIETY—Nov. 18, 1851.—The President in the chair. A collection of plants in pots, by John Lambert's gardener, was interesting. This being the show night for *Chrysanthemums*, there were eight collections presented, in which were many of the choicest kinds; and were from Robert Buist's, James Dundas', George North's, John Lambert's, A. Parker's, and Caleb Cope's grounds; the collection from the latter consisted of those new and beautiful varieties called *Lilliputian*, which have been recently imported, and for the first time shown; they are decidedly the prettiest of this tribe of plants. From the same source was seen another of those exquisitely beautiful baskets of cut flowers, which for several meetings past have graced the tables, containing the choicest flowers of the green-house, of which many were from air plants, but as at the last occasion, the crowning flower was the *Victoria Regia*, the 24th production of the plant; although of smaller proportions than those borne by the plant when in full vigor, still it was a perfect gem, and much admired. Among the fruits were seen beautiful specimens of pears,

some luscious in taste—they came from H. W. Cleveland, Burlington, Isaac P. Baxter, N. W. Roe, of Woodbury, A. M. Eastwick, J. P. Cushing, Mass.—the Dix, and a specimen of the pound variety weighing twenty-two ounces, from the state fair at Harrisburgh. Three tempting bunches of Black Hamburg Grapes were displayed by H. W. S. Cleveland. Several dishes of Apples were exhibited, and were from David Miller, Jr., Lancaster co. The Fuller, Walder, Pittsburgh Pippin, Better than Good, and Herman's Favorite. James H. Watts of Rochester—the Northern Spy—C. Lee, Penn-Yan, the Wagoner; Mathew McKie, the Clyde Beauty. Of vegetables, Anthony Fuller, Jr., exhibited an extensive display; and Maurice Finn, gardener to Mr. Lambert, John Gallagher, gardener to Miss Gratz, and Thos. Meehan, gardener to A. M. Eastwick, very creditable displays.

The President in a few remarks, in acknowledgment to the society for the honor conferred upon him at the last meeting, by the award of the gold medal for his success in the cultivation of the Victoria Regia, announced that he had just received a very interesting letter from Sir Wm. J. Hooker, which was read, expressing his gratification at his success in cultivating the Victoria, stating the fact of his having sent seeds to Calcutta and the West Indies, where flourishing plants had been grown and seeded abundantly in the open waters. Mr. Cope remarked, that the plant which he had growing in his garden tank, had two flower buds when it was taken up recently.

A communication from A. H. Ernst, president of the Cincinnati Horticultural Society, was read, desiring that the great exhibitions of the prominent horticultural societies should be held at such times as would give the members of each society an opportunity of visiting each other's display, and thus derive information mutually beneficial. The subject was referred to the appropriate committee.

December 16, 1851.—The extreme severity of the weather precluded an extensive display, yet a number of objects of interest were shown; of which were a collection of plants, new, and recently introduced, and presented by Robert R. Scott, consisting of *Drimys Winterii*, *Centropogon fastuosum*, *Illicium religiosum*,

Franciscea eximia, *Veronica Andersonii* and *Hibiscus*, sp. The President's gardener exhibited a beautiful and neat table design, and a large and very handsome basket of the choicest flowers; in the latter were specimens of *Phalaenopsis amabilis*, rare, and other new and valuable *Orchidaceæ*. Mr. Dundas' gardener brought in a very large and fine pyramidal bouquet of fruit. H. W. S. Cleveland exhibited three large bunches of Black Hamburg Grapes. Isaac P. Baxter, dishes of Pears of the Passe Colmar and Vicar of Winkfield varieties. Of vegetables, there were seen very large specimens of potatoes and onions, grown in California, and shown by Wm. H. Evans. Very extensive tables of esculents in great variety, were presented by Anthony Felten, Jr., and Miss Gratz's gardener.

The committee for establishing premiums reported a schedule for the coming year, which was adopted by the Society. THO. P. JAMES, Recording Secretary.

Answers to Correspondents.

HALF HARDY PLANTS.—W. P., (Anburn, N. Y.) Chinese Azaleas are almost hardy. Messrs. Hogg, of N. Y., keep them in common frames—a box of boards covered with glass—and the latter sheltered by a few mats in very severe weather. Most of the Fuchsias may be wintered in a pit without heat—especially if the pit is dry and sunk a couple of feet below the level of the ground. We doubt if the Araucaria or Chili Pine will prove hardy with you. If it does, it will only be on very dry, sandy soil. *Plumbago Larpena* is found hardy about New-York, in a dry soil and a shaded situation. It bloomed abundantly and was very showy from August to November.

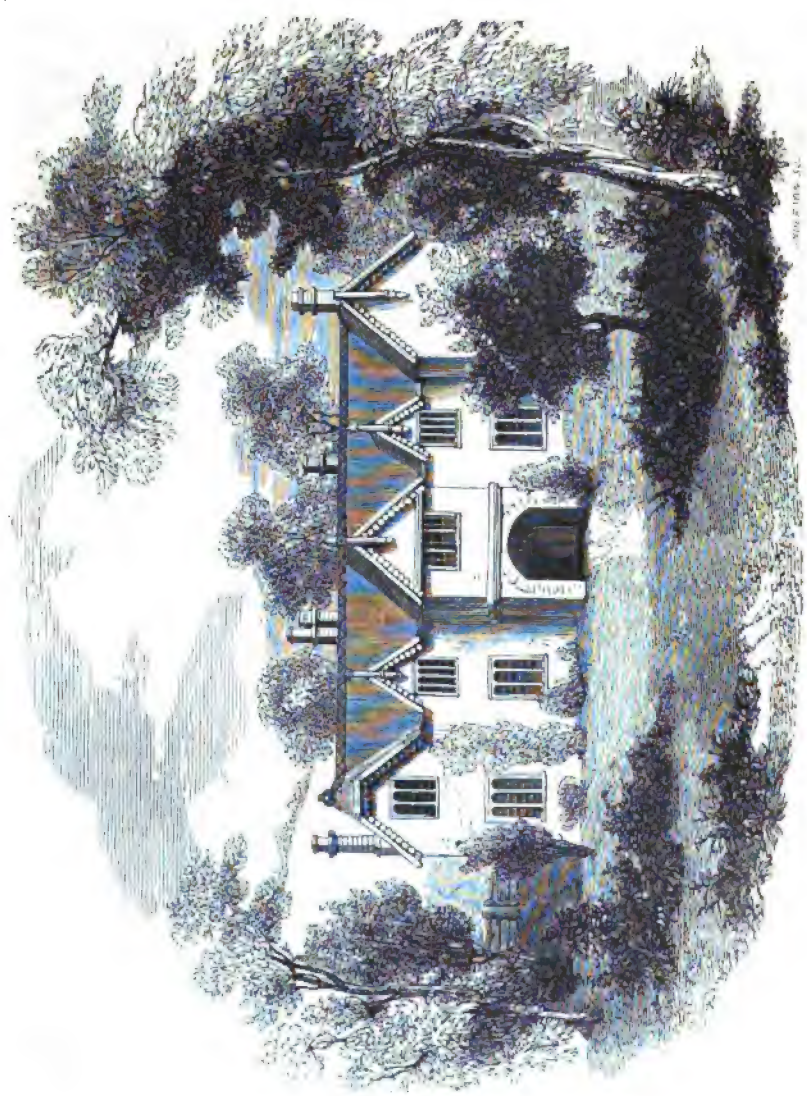
GREEN HOUSES.—A Lady, (Norwich.) From the account you give, we have no doubt your plants suffer from the dry hot-air caused by the flues being heated to a high temperature to keep out frost. You should keep a large tin vessel filled with water on the hottest part of the flue and if you can contrive to introduce a stream of fresh air from outside and let it pass over a portion of the flues, so as to come into the house warm, you will find the health of the plants amazingly improved by it. A small brick chamber formed around the furnace, con.

nected with the open air by a pipe, and with the air of the green house by another pipe, would answer the purpose;—or a tin drum might be formed over the hottest part of the flue into which the outer air may be admitted and passed into the house, when warm. Many plants refuse to expand the flowers properly in a green house when there is plenty of light and heat, solely from the want of fresh air.

GOOSEBERRIES.—*A constant reader*, (Trenton, N. J.) This fruit does not succeed here so well as in England, because our climate is too hot and dry for it. In Maine and Canada they bear very finely. To succeed in your garden, you must choose a border on the north side of a paling fence—trench it two feet deep, laying in the bottom spit of the trench a heavy dressing of fresh stable manure. In this plant the best English gooseberries, of such sorts as Crown Bob Gascoigne, White-Smith, Royal Sovereign, &c. The bushes should be about three feet apart. When planted keep the bushes trimmed to a single stem, and thin out the shoots, in March, pretty freely. The next, and most important point, is to keep the whole border mulched, 6 inches deep, to preserve the coolness and moisture of the earth—in order to prevent mildew. The best substance for mulching gooseberries is salt hay; the next best tan-bark. It is better to have a dozen plants grown in this way, with large clear fruit than a hundred, as we usually see them, covered with mildew.

GROWING MUSHROOMS IN WINTER.—*J. B.* (Philadelphia.) Nothing is easier than to produce a crop of mushrooms under the stage or under the walk of a green-house, if the walk is one made partly open of wooden slats. All you want is mushroom *spawn*, [seed] which may be bought at any of the large seed stores, manure and warmth. The following directions by GLENNY, are so much to the point on mushroom culture, that we cannot do better than reprint them. The theory of growing

mushrooms may be reduced to a rule that is unerring in numerous ways. First; horse droppings, or short dung, with body enough to generate heat, will always produce a crop of mushrooms if spawn is inserted. Consequently, a mushroom bed may be made like a hot-bed, anywhere, so that it be kept dry. Second; horse droppings or short dung, in too small a quantity to generate heat of itself, will nevertheless, produce mushrooms when spawned, if the temperature of the house is kept up. Consequently, a large pot filled all but two inches with horse droppings, a lump of spawn put in, and two inches of mould at the top, will yield mushrooms in great plenty, if put in a stove, (or hot-house of high temperature). Shelves two feet wide, with a two-inch ledge in front, may be filled as full as possible, on a slope, with droppings or short dung by which means the wall of a shed or out-building capable of keeping the frost out, may be made to hold several tiers, one above the other, two feet distance being enough from one shelf to the other, the moulding and spawning being similar to all other beds; but the temperature ought to be steady, and no draught admitted. This mode of culture in a cellar is very desirable, light being not at all requisite to the production of the mushroom. The principal attention required is to have the dung of a good genial warmth at the time the spawn is inserted. After it has begun to work well, all that is necessary is to keep off frost, cold winds and draught. A covering of clean straw is of great service, and it must not be forgotten that moisture is necessary, though too much of it is mischievous. Mushroom houses have been erected on various plans; but as almost every kind of structure, from a cellar to an attic, from a stove to a shed, can be made available, we should never think of constructing a house on purpose. There is not a corner that may not be appropriated to the culture of this valuable esculent.



Hayes Farm—Devonshire—the Birthplace of Sir Walter Raleigh.

THE

Horticulturist

and

JOURNAL OF RURAL ART AND RURAL TASTE.

Citizens Retiring to the Country.

IN a former volume we offered a few words to our readers on the subject of choosing a country seat. As the subject was only slightly touched upon, we propose to say something more regarding it now.

There are few or no *magnificent* country seats in America, if we take as a standard such residences as Chatsworth, Woburn, Blenheim, and other well known English places—with parks a dozen miles round, and palaces in their midst larger than our largest public buildings. But any one who notices in the suburbs of our towns and cities, and on the borders of our great rivers and railroads, in the older parts of the Union, the rapidity with which cottages and villa residences are increasing, each one of which costs from three, to thirty or forty thousand dollars, will find that the aggregate amount of money expended in American rural homes, for the last ten years, is perhaps, larger than has been spent in any part of the world. Our Anglo-Saxon nature leads our successful business men always to look forward to a home out of the city; and the ease with which freehold property may be obtained here, offers every encouragement to the growth of the natural instinct for landed proprietorship.

This large class of citizens turning country-folk, which every season's revolution is increasing, which every successful business year greatly augments, and every fortune made in California helps to swell in number, is one which, perhaps, spends its means more freely, and with more of the feeling of getting its full value, than any other class.

But do they get its full value? Are there not many who are disgusted with the country after a few years' trial, mainly because they find country places, and country life, as they have tried them, more expensive than a residence in town? And is there not something that may be done to warn the new beginners of the dangers of the voyage of pleasure on which they are about to embark, with the fullest faith that it is all smooth water?

We think so : and as we are daily brought into contact with precisely this class of citizens, seeking for and building country places, we should be glad to be able to offer some useful hints to those who are not too wise to find them of value.

Perhaps the foundation of all the miscalculations that arise, as to expenditure in forming a country residence, is, that citizens are in the habit of thinking everything in the country *cheap*. Land in the town is sold by the foot, in the country by the acre. The price of a good house in town is, perhaps, three times the cost of one of the best farms in the country. The town buys everything : the country raises everything. To live on your own estate, be it one acre or a thousand, to have your own milk, butter and eggs, to raise your own chickens and gather your own strawberries, with nature to keep the account instead of your grocer and market woman, that is something like a rational life ; and more than rational, it must be cheap. So argues the citizen about retiring, not only to enjoy his *otium cum dignitate*, but to make a thousand dollars of his income, produce him more of the comforts of life than two thousand did before.

Well ; he goes into the country. He buys a farm, (run down with poor tenants and bad tillage.) He builds a new house, with his own ignorance instead of architect and master builder, and is cheated roundly by these who take advantage of this masterly ignorance in the matter of bricks and mortar ; or he repairs an old house at the full cost of a new one, and has an unsatisfactory dwelling forever afterwards. He undertakes high farming, and knowing nothing of the practical economy of husbandry, every bushel of corn that he raises costs him the price of a bushel and a half in the market. Used in town to a neat and orderly condition of his premises, he is disgusted with old tottering fences, half drained fields and worn-out pastures, and employs all the laboring force of the neighborhood to put his grounds in good order.

Now there is no objection to all this for its own sake. On the contrary good buildings, good fences, and rich pasture fields are what especially delight us in the country. What then is the reason that, as the country place gets to wear a smiling aspect, its citizen owner begins to look serious and unhappy ! Why is it that country life does not satisfy and content him ? Is the *country*, which all poets and philosophers have celebrated as the Arcadia of this world,—is the country treacherous ? Is nature a cheat, and do seed-time and harvest conspire against the peace of mind of the retired citizen ?

Alas ! It is a matter of *money*. Everything seems to be a matter of money now-a-days. The country life of the old world, of the poets and romancers, is cheap. The country life of our republic is *dear*. It is for the good of the many that labor should be high, and it is high labor that makes country life heavy and oppressive to such men—only because it shows a balance, increasing year after year, on the wrong side of the ledger. Here is the source of all the trouble and dissatisfaction in what may be called the country life of gentlemen amateurs, or citizens, in this country—"it don't pay." Land is cheap, nature is beautiful, the country is healthy, and all these conspire to draw our well-to-do citizen into the country. But labor is dear, experience is dearer, and a series of experiments in unprofitable crops the dearest of all ; and our

citizen friend, himself, as we have said, is in the situation of a man who has set out on a delightful voyage, on a smooth sea, and with a cheerful ship's company; but who discovers, also, that the ship has sprung a leak—not large enough to make it necessary to call all hands to the pump—not large enough perhaps to attract anybody's attention but his own, but quite large enough to make it certain that he must leave her or be swamped—and quite large enough to make his voyage a serious piece of business.

Everything which a citizen does in the country, costs him an incredible sum. In Europe, (heaven save the masses,) you may have the best of laboring men for twenty or thirty cents a day. Here you must pay them a dollar, at least our amateur must, though the farmers contrive to get their labor for eight or ten dollars a month and board. The citizen's home once built, he looks upon all heavy expenditures as over; but how many hundreds—perhaps thousands, has he not paid for out-buildings, for fences, for roads, &c. Cutting down yonder hill, which made an ugly blotch in the view,—it looked like a trifling task; yet there were \$500 swept clean out of his bank account, and there seems almost nothing to show for it. You would not believe now that any hill ever stood there—or at least that nature had not arranged it all, (as you feel she ought to have done,) just as you see it. Your favorite cattle and horses have died, and the flock of sheep have been sadly diminished by the dogs, all to be replaced—and a careful account of the men's time, labor and manure on the grain fields, shows that for some reason that you cannot understand, the crop—which is a fair one, has actually cost you a trifle more than it is worth in a good market.

To cut a long story short, the larger part of our citizens who retire upon a farm to make it a country residence, are not aware of the fact, that capital cannot be profitably employed on land in the Atlantic states, *without a thoroughly practical knowledge of farming*. A close and systematic economy, upon a good soil, may enable, and does enable some gentlemen farmers that we could name, to make a good profit out of their land—but citizens who launch boldly into farming, hiring farm laborers at high prices, and trusting operations to others that should only be managed under the master's eye—are very likely to find their farms a sinking fund that will drive them back into business again.

To be happy in any business or occupation, (and country life on a farm is a matter of business,) we must have some kind of *success* in it; and there is no success without profit, and no profit without practical knowledge of farming.

The lesson that we would deduce from these reflections is this; that no mere amateur should buy a large farm for a country residence, with the expectation of finding pleasure and profit in it for the rest of his life, unless, like some citizens that we have known—rare exceptions—they have a genius for all manner of business, and can master the whole of farming, as they would learn a running hand, in six easy lessons. Farming, in the older states, where the natural wealth of the soil has been exhausted, is *not* a profitable business for amateurs—but quite the reverse. And a citizen who has a sufficient income without farming, had better not damage it by engaging in so expensive an amusement.

“But we must have something to do; we have been busy near all our lives, and

cannot retire into the country to fold our hands and sit in the sunshine to be idle." Precisely so. But you need not therefore ruin yourselves on a large farm. Do not be ambitious of being great landed proprietors. Assume that you need occupation and interest, and buy a small piece of ground—a few acres only—as few as you please—but without any regard for profit. Leave that to those who have learned farming in a more practical school. You think, perhaps, that you can find nothing to do on a few acres of ground. But that is the greatest of mistakes. A half a dozen acres, the capacities of which are fully developed, will give you more pleasure than five hundred poorly cultivated. And the advantage for you is, that you can, upon your few acres, spend just as little or just as much as you please. If you wish to be prudent, lay out your little estate in a simple way, with grass and trees, and a few walks, and a single man may then take care of it. If you wish to indulge your taste, you may fill it with shrubberies, and arboretums, and conservatories, and flower gardens, till every tree and plant and fruit in the whole vegetable kingdom, of really superior beauty and interest, is in your collection. Or, if you wish to turn a penny, you will find it easier to take up certain fruits or plants and grow them to high perfection, so as to command a profit in the market, than you will to manage the various operations of a large farm. We could point to ten acres of ground from which a larger income has been produced than from any farm of five hundred acres in the country. Gardening, too, offers more variety of interest to a citizen than farming; its operations are less rude and toilsome, and its pleasures more immediate and refined. Citizens, ignorant of farming, should, therefore, buy small places, rather than large ones, if they wish to consult their own true interest and happiness.

But some of our readers, who have tried the thing, may say that it is a very expensive thing to settle oneself and get well established, even on a small place in the country. And so it is, if we proceed upon the fallacy, as we have said, that everything in the country is cheap. Labor is dear; it costs you dearly to-day, and it will cost you dearly to-morrow, and the next year. Therefore, in selecting a site for a home in the country, always remember to choose a site where nature has done as much possible for you. Don't say to yourself as many have done before you—"Oh! I want occupation, and I rather like the new place—raw and naked though it may be. *I will create a paradise for myself.* I will cut down yonder hill that intercepts the view, I will level and slope more gracefully yonder rude bank, I will terrace this rapid descent, I will make a lake in yonder hollow." Yes, all this you may do for occupation, and find it very delightful occupation too, if you have the income of Mr. ASTOR. Otherwise, after you have spent thousands in creating your paradise, and chance to go to some friend who has bought all the graceful undulations, and sloping lawns, and sheets of water, natural, ready made—as they may be bought in thousands of purely natural places in America, for a few hundred dollars, it will give you a species of pleasure-ground-dyspepsia to see how foolishly you have wasted your money. And this, more especially, when you find, as the possessor of the most finished place in America finds, that he has no want of occupation, and that far from being finished, he has only begun to elicit the highest beauty, keeping and completeness of which his place is capable.

It would be easy to say a great deal more in illustration of the mistakes continually made by citizens going into the country; of their false ideas of the cost of doing everything; of the profits of farming; of their own talent for making an income from the land, and their disappointment, growing out of a failure of all their theories and expectations. But we have perhaps said enough to cause some of our readers about to take the step, to consider whether they mean to look upon country life as a luxury they are willing to pay so much a year for, or as a means of adding something to their incomes. Even in the former case, they are likely to underrate the cost of the luxury, and in the latter they must set about it with the frugal and industrious habits of the real farmer, or they will fail. The safest way is to attempt but a modest residence at first, and let the more elaborate details be developed, if at all, only when we have learned how much country life costs, and how far the expenditure is a wise one. Fortunately, it is *art*, and not nature, which costs money in the country, and therefore the beauty of lovely scenery and fine landscapes, (the right to enjoy miles of which may often be had for a trifle,) in connection with a very modest and simple place, will give more lasting satisfaction than gardens and pleasure grounds innumerable. Persons of moderate means should, for this reason, always secure, in their fee simple, as much as possible of natural beauty, and undertake the elaborate improvement of only small places, which will not become a burden to them. Millionaires, of course, we leave out of the question. They may do what they like. But most Americans, buying a country place, may take it for their creed, that

Man wants but *little* land below,
Nor wants that *little* *dear*.

TO GUARD TREES AGAINST HARES AND RABBITS.

BY J. GIRARDIN, FRANCE.*

ALL gardening amateurs know, by experience, that rabbits and hares are very fond of the bark of young apple trees of a year's growth, and especially of dwarf apple trees, of which the most vigorous and healthy, are always attacked the first, because the bark is more tender and savoury.

As soon as the ground is covered with snow, these animals, finding nothing to nibble in the fields, begin their devastations in the gardens; if they are numerous, and the snow is abundant, a few nights will suffice to ruin completely the most beautiful plantation, and destroy the result of several years' labor and care. Only a short time since, three hundred fruit trees in the gardens and orchards of a land owner in the village of Othel in the province of Hanover, in Belgium, were entirely stripped of their bark.

Fortunately, nothing is easier than to shelter one's trees from the attacks of these marauders, that are protected by the law; the following method is employed by M. LE BARON VANDER STRAETEN DE WAILLET, for six or seven years, with entire success:

He infuses about two pounds of quick lime, in nearly three gallons of water; he throws several handfuls of soot into this liquid, and stirs it until these two substances are thoroughly mixed. He then makes a paste of a handful of fine rye flour and binds it in

* Translated for the Horticulturist, from the *Cercle pratique d'horticulture de la Seine Inferieure*.

the form of a brush, upon a stick,* and with this mixture he covers the branches and the trunk of his trees, from the ground to the height of at least a yard; as, if the snow should be heaped up at the foot of the trees, by the wind, the hares could by its help, attain a greater height on the bark of the tree.

This mixture applied quite warm, possesses the additional advantage of keeping the bark in a state of preservation and health, and preventing the growth of moss, of which the effect is often injurious, and which is always disagreeable to the sight.

It is best to use this means of protection early in November, during a dry season, which will allow the mixture to adhere to the bark while drying. If there should be rain during the operation, or immediately after, the trees would be washed and it would have to be repeated.

If it should be done during a frost, there would be but little chance of success. The plaster with which the bark had been covered might be thrown off in a thaw. If, however, by want of prudence, the operation is overtaken by the frost, and it is necessary to act quickly, it may be done with success, by selecting that time of the day when the trees are most exposed to the direct rays of the sun.

Twelve pints of this mixture will be sufficient to protect 3 or 400 dwarf trees against the hares or rabbits, and may be obtained for a few cents worth of lime and one day's labor of an active man. This method is equally infallible for preserving the grafts of all nursery trees.

J. GIRARDIN.

HINTS FOR COUNTRY HOUSES.

SEE FRONTISPIECE.

WE have engraved for our frontispiece this month, a view of a very interesting old English building—known as *Hayes Farm*, in Devonshire. It is doubly interesting to us. First, as having been the birth place of the celebrated Sir WALTER RALEIGH—whose name is always associated with the early history of America; in the second place, as a good example of a style of respectable country house still very common in England. Simple in character, built of solid materials, of ample size, and full of substantial comfort; it seems to us a better type to study, and a better hint for a model, than most of the over-decorated cottages and villas at present so much the fashion. Of course, it is only a hint, for some of the details are faulty, but the expression is genuinely that of a substantial country house that has no pretension which it cannot fulfill, and which aims at being nothing which it is not in reality. We like the simplicity of the solid walls of stone roughcast, the plain gables and windows, and the ample porch. Diminish the size of this house to suit our wants, and add a veranda, and a more appropriate style for a country house in the northern states, is not easily attained.

THE CURLED LEAF ON THE PEACH TREE.

BY C. E. GOODRICH, UTICA, N. Y.

IN the culture of peaches here, an evil has been encountered for the last two years, which, so far as I have experience, is new. You are doubtless aware that the elevation of this part of the state, and its distance from large bodies of water, make its climate at best, much cooler than at Buffalo, Albany, and Boston, which lie nearly on the same parallel. Hence the culture of peaches here, at best, is difficult. The evil to which I refer is the "curled leaf." There is a "curled leaf" noticed by DOWNING, which is described as a trivial evil, and is, by him, ascribed to an insect. But the evil which I am now about to describe is very formidable, and has resulted in my own case, in the almost entire destruction of the peach crop. I do not know its extent. I have heard of its existence in various parts of this state and in Ohio. A native of England told me recently that he had seen it there.

In the spring, of 1845, I planted peach-stones, derived from a source now forgotten, if it was ever ascertained. It would have been wise to assure myself that they were from the north or west, since, both theoretically and practically, such stones are preferable to those brought from the south. Some of these trees were budded with choice varieties, named in the books; others were permitted to produce natural fruit. From the time they began to flower, (in their third and fourth years,) until two years since, the great obstacle encountered was the severity of the winter's cold, it being found that the depression of the thermometer to from 10° to 15° below zero, for a few days, was pretty sure to destroy the vitality of nearly all the fruits buds. For the last two years I have encountered a new evil—the "curled leaf."

The immediate facts in the case are these. Within one week, (sometimes a little less or more,) after the trees are in full bloom, a red color, (at first very pale,) is seen upon the young rosettes of leaves. This indication advances rapidly, sometimes over a single branch, but usually over the whole tree, involving from a few leaves to nearly the whole of them, according to the severity of the attack. The circulation seems paralyzed, so that the young shoots do not extend themselves; the leaves rapidly thicken, curl up, turn whitish, pale, green, yellow, or almost any color, and acquire three or four times their proper weight, become covered with insects in some cases, and soon drop off, carrying with them whatever fruit had set. After this, in severe cases, the whole or a part of the tree dies; but more commonly new leaves put out, especially from the extremity of the branches, and from dormant buds, and soon clothe the whole tree with verdure. In a few cases, more severe still, the tree dies in its first efforts to develop its leaves, which never expand enough to show much curl of the leaf or the red tinge.

The Cause of the Curled Leaf.—It has been charged to insects, but my microscope, (which is the kind called a "cloth prover,") and is of one inch focal distance, detects none. There are insects seen in the later stages of the evil, among the convolutions of the leaves, but they evidently came there as they seek out other decaying vegetable or animal matter, to find food and a home; and were no how the cause of the curl.

One thing is obvious to slight observation, that is, *that the evil arises from within the bud or tree itself*, since the moment the leaves begin to expand, they are seen in many cases to be taking on a sickly state. It should not be forgotten, too, that all this takes place at an earlier period than insects show themselves to any extent.

The disease, for such I certainly consider it, is obviously the result of severe and un-

timely weather, and admits of a ready and satisfactory explanation. Its history, in connection with the state of the weather, during the last spring, will, I think, set this matter in a clear light, and will show, moreover, that the peach suffers this liability to disease in common with most tropical and semi-tropical trees and plants, and is closely allied to one, (the most common) form of the potato disease.

From March 22d to April 1st, inclusive, the weather was very unusually warm, the thermometer standing on the 30th at 75°. The gooseberry was rapidly coming into leaf, and the cherry and the peach were almost bursting into flower. I said to my family at this time, "these trees must suffer. They cannot flower safely now, nor yet be safely retained in their swollen state until the ordinary time of flowering," which is here usually between the 10th and 15th of May.

On the 2d of April commenced a season of cold and damp weather, (occasionally exhibiting both frost and snow,) which continued exactly thirty-six days, i. e., until 8th of May. On that day began a season of warm, impulsive weather, which brought the peach into full bloom upon the 13th, i. e., in five days. Those buds that had been most excited late in March, never opened. On examination they exhibited the elementary parts of the flower in a dry and friable condition. The flowers which opened, exhibited various degrees of health. A few of them set fruit, but the most of them blasted. The same general course was run by the *leaf buds*. A few whole trees, and many single branches on others, never fully expanded the leaf buds, but died in the effort. A few trees were scarcely affected at all. Between these two extremes was every degree of suffering by the curled leaf, the first exhibition of which began to appear on the 15th, three days after the trees were in full flower. In one week after the first appearance of the curl, it was fully developed, as the season advanced with great rapidity.* What farther relates to this subject, I will detail under the following particulars:

1. The *glandless* varieties, as a class, were far less affected than the *glanded*. Indeed, the most of those were affected either in a small degree, or not at all. Now this is just what might have been expected. The glandless varieties always suffer from mildew on the extremity of the branches late in the summer, the effect of which is to dwarf the tree slightly, and so render the growth more firm, and insure the earlier maturity of the bud. There will thus be less soft and sappy wood, and fewer feeble buds on such trees. My *glanded* trees were nearly all affected, the most of them badly.

2. Some *glanded* trees that were very strong growers, *whose fruit buds have stood the severe cold of winter better than any others*, suffered very severely. This may seem strange and contradictory, but admits, I think, of a ready explanation. These trees had well matured their buds, and so stood the winter well while dormant; but the vigorous character of the tree caused a proportionate early and vigorous start of the circulation in the spring. This prepared them to feel a check in the circulation more fatally than trees of less constitutional vigor, which started somewhat later, and less vigorously.

As an illustration of this second fact, I observe that I have five seedling *glanded* trees, all very rank growers, one an early fruit, one somewhat late, and three very late, which,

* Very similar was the weather in 1850. The winter had been unsteady and very mild. From April 24th to 27th, there were four very warm days, the thermometer rising to 76. Then it became cold and windy. By the first of May the buds which had been prematurely excited and then chilled, began to fall off. The flowers opened about the 12th, and the leaf buds developing immediately after, showed signs of curled leaf. From the 17th to the 21st, inclusive, the weather was severe, exhibiting both frost and snow. Frost was subsequently reported as having occurred during these severe days, in Canada, Boston, New-Haven and New-Jersey. Since 1812 we have suffered no untimely warm weather in the spring, equal to 1850 and 1851. The weather from the 4th to the 8th of April, inclusive, in 1844, came the nearest to it. We have not, therefore, had the *same causes* of curled leaf, at least for many years, as in 1850 and '51.

year by year, both before and since the advent of the curled leaf, have stood the winter well, and have been uniformly covered with flowers; and yet they have suffered peculiarly from the ravages of the curled leaf for two years past. The "Teton de Venus" also, though its fruit buds have not stood the winter well, is a very strong grower, and drops its leaves in good season in autumn, yet it has been almost ruined by the curled leaf.

3. In all cases where the center leaves of the bud when it first opened, exhibited the curl, the shoot beneath never elongated at all, or not more than an inch or two, and then the whole withered and died under the curl.

4. In those cases where the center of the bud did not exhibit the curl, the shoot elongated regularly, although as it grew there might be curled leaves at the base, and along the sides of it. Such branches flourished, being a little dwarfed until they cast off the diseased leaves.

5. In a few cases the points of the shoots, and at other times the side and base leaves, were found diseased with the curl in mid-summer. In all such cases there was a clear connection between these diseased manifestations and the state of the weather.

6. Each one of my trees, (I have five or six hundred,) so far as I have observed, has a definite proportional liability to the curled leaf; that is, the tree that suffered severely, slightly, or not at all last year, suffered similarly this year.

7. I think also, (although my attention has not been so definitely directed to that point as to some others,) that those trees that are most liable to be heated in a calm warm day, and subsequently to be severely chilled by cold wind, are also most liable to be affected by curl. All this is consistent with another fact, that half hardy trees, of which the peach is one, do undoubtedly succeed best when their position, on the whole, is a cool one, and as little exposed as possible to changes of weather.

8. So also, sickly trees are found in succeeding years, to be particularly exposed to the curl. This results obviously from the fact that its whole vigor is reduced.

9. When first beginning to curl, the whole leaf, but particularly the foot stalks, ribs, and glands, exhibit a high degree of transparency, and usually a redness. This, on examination with the microscope, exhibits no insect, egg, puncture, or other irregularity, often not even the curl, in the very young state of the leaf. Its growth, also, for a few days, seems nominally rapid. What strikes the observer is the transparency which seems to reveal almost the whole interior circulation of the leaf; the wax-like smoothness of the surface of the young leaves; the reddish tinge; the early disposition to curl. This last disposition is sometimes seen in the tendency of the two opposite halves of the leaf to adhere to each other, and at others, in the edges of the leaf to corrugate, just as in that form of the potato disease that is caused by chills at a later period in the summer. The progressive enlargement of the leaf, its endless contortions, its changes to various colors, but especially the studding of its surface with delicate velvety blotches, of a most beautiful texture and coloring, are all very noticeable facts. These velvety blotches are undoubtedly a fungus formation, not however, I think, of a parasitic character. Soon these progressive manifestations are finished, as the leaf blackens, dies and falls.

May we not derive some illustration of the mode of atmospheric influence in this case, from the condition of leaves generally, in autumn. Then, when the light and heat are no longer such as to satisfy the normal requirements of vegetation, when especially the downward progress of vegetation has been hastened by severe and sudden frost, we see the same discoloration and death. In the autumn, however, the deposition of woody matter in the leaf is complete. Hence, when those atmospheric changes come that paralyze the circulation, and give to chemical law the mastery over vital energies, and the sap becomes

acid, the leaf is not transparent, as in the spring, when the tissues were thin and imperfect, and the whole leaf was little more than an aggregation of thin vessels filled with watery juices.

So of the curled leaf in the spring. The sap was excited at an untimely period, and then, instead of being permitted to perform its proper office, that of expanding the flowers, leaves, and shoots, it was held in check thirty-six days this year, (though less than that period in 1850,) and followed in the case of last year, by severe frost and snow. The condition of the sap became necessarily morbid, as naturally and truly as in the parallel case of an animal overheated and subsequently chilled. In the latter case feebleness, and it may be fever or sores, follow as the natural proof of diminished vital energy, or morbid condition. In the case of the peach this year, when the circulation revived, or at least was greatly accelerated, on the 8th of May, the depraved state of the sap was seen in the feeble flower and the sickly leaf, to say nothing of the buds which fell off, and the branches that died without developing flowers and leaves at all,—buds, flowers, and branches, which, before the untimely excitement of the circulation in March, were as promising as any other.

Remedy.—It is quite too early to recommend a remedy with confidence. A longer and more accurate acquaintance with the progress and modifications of disease, may be needful. Yet I would with some assurance suggest

1. *An immediate and temporary remedy.*—This would be to permit the earth around the tree to freeze deeply, and then cover it deeply with waste rubbish, so as to retain the tree in a dormant state as long as possible, at least until the circulation may be permitted to advance without fear of a check. I am aware that a large amount of fluid is stored up in the tree in autumn, and that many of the roots penetrate below the ordinary reach of the frosts. Hence it may be impossible perfectly to check the circulation. But I think the mode suggested would in ordinary cases prove sufficient. Potato vines, buckwheat straw, but especially evergreen boughs, would all be found useful. These might be placed near the trees after the ground had begun to freeze, (before that it would invite mice.) The application should be made when the frost and snow have most accumulated. They should be renewed in this climate, (central New-York,) about the first of May. When the summer heat has well set in, and the earth is thoroughly warmed, it might be restored as a means of defence against excessive heat and sudden changes.

2. *The remote remedy.*—This would be to plant only the hardiest stones, such as come from northern fruit. These would make hardier stocks than southern stones. In case of cultivating seedlings, it would be well to plant largely, and then, about the fourth and fifth years, to reject all such as show themselves liable to the curled leaf. Had I proceeded in this manner in the selection of my stocks, I should now be much better able than I now am, to judge of this whole subject.

Results.—With such stocks as I have, the following results have been arrived at:

1. The Teton de Venus, George the Fourth, and Late Yellow Rareripec, (all glanded varieties,) are nearly a failure, usually, and almost entirely, from the winter's cold, and equally from the effects of the curled leaf.

2. The Early Tillotson, True Early York, Red Rareripec, and Morris' Red Rareripec, (all glandless except the last,) are a little better in regard to the winter's cold, and very much better in respect to the curled leaf.

3. My other budded sorts are yet too young to be judged of with certainty. I hope, however, the White Imperial will resist the curled leaf, especially where planted in moist soil, as has been recommended for this sort.

4. I have four seedlings that bid fair perfectly to resist the curled leaf, as well as the winter's cold. Two of them are glanded and very late; the one a fair fruit for the table, the other fit only for cooking. The other two are glandless; the one early and fine, the other very late, fit only for cooking.

With the foregoing precautions, I think the evils of the curled leaf will be remedied in part, and in part avoided; and that by the latter remedy peach trees may be produced whose buds will retain their vitality through the cold of all ordinary winters.

Such trees as set their fruit safely in May, and ripen in good season in the autumn, are almost sure to find summer heat enough to mature rich and luscious fruit. By these means I hope to see fair and tolerably constant crops of good peaches yet produced, in seasons ordinarily favorable, even in Oneida county. C. E. G.

Union, Dec. 23, 1851.

ON THE THEORY OF PRUNING FRUIT TREES, &c.

BY L. YOUNG, SPRINGDALE, KY.

TREES and plants cultivated for profit, yield their returns for the most part in secretions of the leaf, or wood-bud system, as timbers, sugars, gums, &c., or in products of the flowering system, in the form of blossoms, as hops; seeds, as nuts and cereals; or in coverings of the seed, as fruits, cotton, and the like. Pruning, (except to effect or to promote symmetry of form, which is not here considered,) in the broad acceptation now given to that term, means any lopping off from the roots or branches of trees or plants in cultivation, with design to stimulate either the leaf-bud system, or its contrary, the fruit bearing. To this diversity of motive in the action of the operator, the fact may be added, that the nature of the part amputated, and even the time of amputation, has something to do with the effect of pruning. It need not, therefore, excite surprise when we see it happen, as happen it certainly does, that the most experienced practical cultivators lay down rules for the guidance of others, discordant in themselves. A desire to aid in rescuing these rules from their present apparent confusion, has induced the author of these numbers to submit his views to the consideration of cultivators; and the elementary remarks contained in the preceding numbers, were deemed indispensable to a classification of said rules, upon the plan designed.

In treating of the antagonistic nature of the wood-bud force, and that of the fruit-bud, I have already said, that according to the books, all the means pointed out as efficient preventives or remedies, in cases where trees or plants were disposed to feebleness of wood growth, from over-bearing, or had already become weak, were in the nature of stimulants or high feeding, either tending to increase the supplies of food thrown into the circulation, or to rid the circulation from the effects of some exhausting influences; while all the means recommended for inducing fruitfulness, in trees so vigorous as to produce wood growth alone, to the exclusion of fruit-buds, are in the nature of debilitants. If, then, fruitfulness be considered as a sort of mean proportion, a state of equilibrium between the wood-bud force in preponderance, which is indicated on the part of the tree or plant by a disposition to produce leaf-buds only; and the fruit-bud force in preponderance indicated by that condition in over-bearing trees or plants in which few or no wood branches are produced, then do these propositions become two elementary truths, touchstones as it were, by which to try every rule of practice before its adoption as part and parcel of that

knowledge which constitutes the science of managing and pruning the orchard and fruit garden, in their most essential particulars, the inducement and maintenance of fruitfulness; and it is in accordance with these propositions my classification will be attempted, dividing the several processes of pruning into two classes, according to their respective nature, and adding to each class such other processes as are adopted by cultivators in aid of pruning.

CLASS I.—Stimulants to the wood-bud force—to be applied as preventives to trees and plants in bearing, when disposed to feebleness, or as remedies, where feebleness from over bearing is present:

1. Cutting out or removing at any time, in whole or in part, as the case may require, from a tree or plant, the fruit-bud system.
2. Shortening-in the wood branches at any time after the close of one growing season, and before the commencement of another.
3. Cultivation of the ground.
4. Manuring.
5. Any device for destroying hurtful insects or mosses, and for securing the health of the roots or leaves.

CLASS II.—Debilitants to be applied as preventives against over-luxuriance in bearing trees or plants disposed to excessive wood growth, or as remedies where the trees or plants are unfruitful by reason of the non-development of fruit-buds.

1. Stinting supplies of food—by confining the tree or plant to a pasturage of limited space, through means of root-pruning, or of stocks having a small system of roots.
2. Neglected cultivation.
3. Retarding the circulation, by bending the branches and destroying capillarity.
4. Breaking the circuit of circulation during the growing season, and before the roots have received an equivalent in vigor and enlargement, for the supplies sent upward in the circulation.

It will be seen from the list of stimulants, that I enumerate two distinct processes of shortening-in; one, proper only between the growing seasons; the other at all times stimulating, in consequence, as I have supposed, of the parasitical nature of the parts removed. The bearing apple tree often exhibits striking proof of the parasitical action of the fruit-bearing force upon the vigor of the tree, as also of the efficiency of shortening-in as a counteracting stimulant; for it often happens that during the growth and maturation of an excessive crop, not a particle of wood seems to be formed; indeed even the fruit-buds for the succeeding year, which generally lie at the point of the spur sustaining the fruit which is being matured, are often starved out, or rendered so feeble as to perish in the following winter. Whenever the terminal fruit-bud is destroyed in this way, wood growth, more frequently than otherwise, takes place from the first bud below or within the terminal bud thus destroyed. This is shortening-in, performed by removing a portion of the fruit-bud system, before the commencement of the growing season; one of the most unmistakable instances of this process, and of its efficiency as performed by accidental means, occurred under my observation in 1851, with two White Doyenne Pears upon quince stock, subjected on the first of May, when in full leaf and fruit, to a temperature of twenty degrees; every fruit, every leaf, and every bud was killed, and many fruit spurs sloughed off; but now those trees are covered with a vigorous wood growth, many branches exceeding a foot in length, although at the time of the frost, and for some years before, there was present that scantiness of wood growth common to the pear dwarfed on the quince when in bearing.

I have in a former number adverted to the effects of removing portions of this fruit system during the growing season, as witnessed in a course of experiments with the peach; but there is a plant in common cultivation whose history illustrates so forcibly the debilitating tendency of the seed producing system, and the manifest relief to the general vigor of the plant, consequent upon a removal of that system, whether sooner or later, in the stages of its growth, that I am tempted to advert it, although perhaps at the expense of that brevity proper for these numbers. I mean the tobacco plant, which, as every body knows, is cultivated for its leaves; but these leaves are grown large or small, thick or thin, at the will of the cultivator, who uses this same fruit or seed producing force as his chief engine of control. Thus, if a heavy and thick article is desired, the upright leading shoot, is pinched out before the slightest development of the seed system appears; in that case the top leaves, although very small at the time of pinching out, expand, and in well cultivated crops become the largest of the plant, and the whole system of leaves keeps up an active circulation with the roots till the approach of frost, constantly increasing in weight. If, however, in the same field, other plants of equal thrift be allowed to grow until the embryo umbels which would ultimately crown them if permitted to flower, are fairly developed, or in planter's parlance, until the "button" is formed, before the leading shoot is cut off, no after care can make these leaves so large or so heavy as those upon the early topped plant; and what is more, the longer the process of heading down is delayed, the lighter will be the leaves. In the first case we see striking evidence of the continued action and reaction between the roots and leaves of the wood-bud system, during the growing season; in the latter, strong proof that the fruit or seed bearing system never ceases to be a burden to the circulation, until it ceases to act. Cutting out, therefore, in whole or in part, the fruit bearing system, is, whenever performed, a species of exorcism; a freeing of the general circulation, in whole or in part, from the paralyzing influences of that magical power, which during the mysterious metamorphosis termed a development of the fruit-bud system, as well as during its existence, seems to weigh like an incubus upon the general vigor of a tree or plant; and if FORSYTH had based his claims to distinction and to national bounty, upon the fact of his having been the first who wrought miracles by the potency of this charm in rejuvenating old trees, by heading them back, and dressing the wounds with his peculiar composition—giving credit where it was due, instead of bepraising a compound of inert ingredients, and thereby perpetrating the egregious error of mistaking a trifling coincident for a most powerful cause, he would to-day hold rank among practical philosophers, instead of being consigned, as he is, to the companionship of humbugs.

As for the other processes listed in class No. 1, they all rest upon well known maxims, and need not be enlarged upon. Cutting back the wood branches after the close of one growing season, and before another begins, is lessening the number of individuals to be fed, without lessening the years' supply. Cultivation destroys rival feeders, and facilitates the passage of the roots in rambling for food, whilst manuring enables them to glean more food from a given extent of pasturage. All insects, fungi, or mosses, interrupt in some way the circulation, so that their destruction is at all times invigorating.

I regret to see by an editorial remark in the November number of the Horticulturist, that I failed to make myself understood in some comments upon Mr. DOWNING's method of shortening-in. I have not intended to say that shortening-in, as a means of preventing the tree from enfeebling itself, was either inefficient or improper. So far from it, I consider this process *the means*—nature's own means. The point I thought untenable in his practice, was prescribing this remedy somewhat as a panacea, and not as a specific. Some-

times a peach tree, three years old, and even much older, has only wood-buds, or wood-buds and branches, in very great excess; to shorten-in these in February or March, to prevent their enfeebling themselves, would be defeating ourselves of what we most desired—if, as is the hypothesis, such trees would remain unfruitful until reduced in vigor.

L. YOUNG.

Springdale, Ky., Dec. 1851.

OUR IMPROVING AGRICULTURE.

BY HENRY F. FRENCH, EXETER, N. H.

THE present Governor of Massachusetts, in his proclamation for thanksgiving, suggests as an occasion for public gratitude, "the increased attention given to agriculture;" and perhaps there is no change in public sentiment of recent date, more worthy of notice than the fact to which he refers. That it is a fact, will not be doubted by any careful observer. Agriculture in England, and on the continent of Europe, has long been regarded as of the very first importance. It is a leading, if not *the* leading subject of conversation there, among gentlemen in the higher circles of society. And well it may be so, as the wealth of the nobility, the prosperity of the middle classes, and the salvation from starvation of the laborers, are plainly seen to depend upon the crop. In Ireland, if one potato crop fails, thousands of the population, perhaps, die of starvation. In America, if our potatoes fail, we merely change our diet for the time, and live just as well upon corn.

But although the fear of actual starvation does not affect us, the *fact* is, that agriculture, as his Excellency the Governor suggests, is getting to be *quite the fashion* throughout the country. Farmers' clubs are taking the place of *caucuses*, and cattle shows of military musters. Every man who has land, is endeavoring to raise a premium crop, and they who are *landless*, are trying to keep up with the times, and serve their country with *pen and ink*, and such *other* agricultural implements as they may have at hand. Not long ago, I met an itinerant lecturer who was traversing the country, "astonishing the natives" with his learned talk about silex, alumina, and divers other

"Latin names for horns and stoves,"

and discoursing most eruditely before the public on agricultural chemistry. He said he sometimes lectured on animal magnetism—that he was familiar with "all those subjects," but that nothing *paid* quite so well just now as agriculture! He had fortified himself with a full set of Professor MAPES' Working Farmer, and other "good works," and with abundance of assurance instead of "faith," to match, was warmly advocating the expediency of working the land at least *three feet deep*, in a neighborhood where it would be a fair forenoon's work, to get a *churn-drill* to that depth!

However, he judged wisely what topic would most interest the people, and how he could best get their money. And now, while there is an interest so deep and universal on this subject, while not only men of true science are diffusing valuable knowledge through the land, but while quacks and charlatans are endangering the safety of the cause by the careless use of *other men's thunder*, it may be interesting to inquire what is reasonably to be expected of science applied to the culture of the earth, of which so much is said and written.

From the remarks of some writers, it might be inferred that agricultural science, and especially agricultural *chemistry*, is to make plain all the hidden things of creation; that by its light we shall discern all the peculiar properties and components of every plant,

from the "hyssop on the wall" to the "Cedar of Lebanon;" that we shall so perfectly comprehend its structure, that we shall, by-and-by, be able to collect the materials and build a *plant*, as we do a plow or cart.

It is true, science may do much for agriculture. She may lead to improvements, as she is constantly doing, unattainable without her aid. She may analyze the *crop* growing upon our field, tell us accurately every element of which the plant, at each stage of progress from blade to flower, from flower to fruit, is constituted. She may analyze the *soil*, and ascertain with precision its elements, and so inform us how far it may supply the requisite food for the desired product. She may catch the falling rains and dews of heaven, and in her crucibles, resolving them to their primary principles, make them disclose how far they may be expected to contribute to the growth of leaf and stem, and flower and seed. She may even take captive the *winds*, and learning of what their balmy breath is made, estimate with tolerable accuracy their influence upon vegetation. She may make analyses of the various substances used by the farmer as *manures*, and see in which of them may be detected those constituents of vegetable growth which are most abundantly supplied by the earth, the water and the air, and so direct him to the most economical expenditure of his treasures.

Science may explain to us the effects, both chemical and mechanical, of *draining* and *deep plowing*—how by these operations the elements of fertility are drawn from "the heavens above and the earth beneath"—how the roots of the plant are thus enabled to traverse far and wide, *selecting* such aliments as its peculiar structure may require. She tells us how, by judicious *amendment* of the soil, as by adding sand to clay, we may render it more open to the action of the sun, more permeable by the dews and rains—or how, as by adding clay to sand, it may be made more compact, and more retentive of water and manures.

Science may teach us the *history of domestic animals*, their varieties and qualities. She may give us the results of careful observations for centuries, upon the effects of *crossing* upon the different breeds, and so inform us how far we may reasonably expect the transmission of peculiar traits, moral or physical, from one generation to another. She may teach us the history of *birds*—how industriously they co-operate with the husbandman in the destruction of myriads of insects, which, but for their aid, would over run his fields, and devour his harvests, thus teaching him to regard their song with pleasure, their presence as a blessing, instead of waging against them, as he did in less enlightened days, a cruel war of extermination. She tells us how the wood-pecker, formerly regarded as a deadly enemy of the orchard, guided by an instinct alike unerring and wonderful, strikes her sharp beak through the bark, and drags with her barbed tongue, from his concealment, some worm which is slowly working his destructive way beneath. She tells us how the beautiful *Oriols*, so often regarded and destroyed by the market gardener, as an enemy of his *peas*, is only devouring the larvæ of the pea-bug, which is already full grown in the green pea fit for the table, and would otherwise make part of some favorite customer's dinner, who, as likely as not, might fancy himself to be living on a strictly *vegetable* diet!

Science collects and arranges the *statistics* of agriculture, collects and compares the various results of occasional or systematic experiments, so essential to right conclusions. She warns us how the resources of the earth are exhausted by the constant conveyance of its fruits to great cities, without adequate provision for the return of their fertilizing products to the soil; how, in the language of a reliable writer, "there has been enough of the elements of bread and meat, and wool and cotton, drawn from the surface of the earth, sent to London, and buried in the ground or washed in the Thames, to feed and

clothe the entire population of the world for a century, under a wise system of agriculture and horticulture."

She shows us how the virgin soil of the New World has been already rifled of its treasures; how the American idea of *developing the resources of the country* has led to the construction of railroads and canals, on which, in the form of wheat and corn, the elements of fertility—the very *life blood* of the earth, have been freighted away and sold for money, and *no return has been made to the land*, till the fertile soil of some counties in New-York, which once produced an average crop of thirty bushels of wheat to the acre, now produce but *seven or eight*; how the continued cropping of lands in parts of Virginia and other more southern states, with tobacco, has literally laid the land desolate, and compelled its inhabitants to seek new homes, on a soil fresh from the hands of the Creator.

And so we are made to perceive, that a system leading to results so disastrous, can be but temporary, and false, and ruinous; that in the New World we have heretofore but gathered the almost spontaneous fruits of the soil, and now must gird up our loins for severe and intelligent labor.

In these, and in a thousand other modes, does *science* aid and direct, and warn, and instruct us. In every form, in every department, is she destined, even more and more, to render us assistance. They who sneer at her name as connected with agricultural progress, do but show their own ignorance.

But, while we would gratefully avail ourselves of every branch of science, it is important that we remember that we labor in a boundless field, and that, although we may constantly advance in the study of the operations of nature, we are at all times liable to error, and often groping blindly in the dark, in our endeavors to solve her mysteries.

The agricultural *chemist* is subject to peculiar embarrassments in his investigations. Although the operations of chemical affinity, and the results of chemical combinations, are doubtless governed by laws as uniform as those of gravitation, and the revolutions of the heavenly bodies, so that the chemist in his laboratory, may pursue his experiments with almost the certainty and clearness with which a mathematician pursues his premises to a demonstration; yet it is quite otherwise when he attempts to apply his principles to the growth of plants. In the *one* case, he deals with two or three elements of known and certain qualities; in the *other*, his expected results may be influenced by the unsuspected presence or action of various substances or agencies. The elements, which in his vessels of glass, will combine but in uniform proportions, and form but one single compound, in the *earth* may be affected by other agents, in such a manner as to prevent the combination expected, and produce results entirely different.

And this is by no means all. In every question affecting the growth of plants or animals, we are involved in a mystery far more perplexing than even the abstruse doctrines of chemical science. I refer to THE LIFE PRINCIPLE.

We know that the seed has power, under certain circumstances, to germinate, to strive upwards for light, to put forth leaves, and flowers, and fruits, and that it finally *dies*. We know, that on the same soil, watered by the same rain and dew, breathed upon by the same air, gladdened by the same sunshine, spring up the rose and the lily, the crocus and the violet, plants of various leaf, and flower, and seed—spring up and flourish side by side together, each retaining its peculiar nature, each *selecting* from the air, the earth, the water, its appropriate nourishment. We know that plants seem endowed with certain *instincts*; that flowers turn towards the light; that certain of our trailing vines will turn from their direct course in a single night, to seek a vessel of water placed near them, and be found next morning with a leaf floating on its surface.

We learn that climbers will seek a prop or pole placed near them in any direction, and that having reached it, some of them, as the *hop*, will invariably twine about it, only in one direction—from east to west, *with the sun*, and as if to confound all human reasoning, and silence inquiry even as to the cause; other species, as the *bean*, twine around the support in the *contrary* direction, and this with such uniformity, that among a million of such plants, no single exception can be found!

The mysteries attendant on *animal life*, are still more startling and complex than those connected with vegetable growth. The influence of the mental and physical qualities of the parent upon the offspring, the circulation of the blood, assimilation of the food for the formation of the various bodily organs, are all mysteries passing our present knowledge.

Bodies, under the incomprehensible laws of this life principle, seem released from chemical rules, and are converted into other bodies, having properties, apparently, entirely distinct and new. The egg, by the application of *heat* merely, is converted into the flesh, and blood, and bones, and feathers of a young bird, and milk, the sole food of many young animals, is changed into the diverse constituents of their breathing bodies.

The chemist and philosopher can offer no explanation of these and a thousand other familiar facts, and this consideration should teach us, while we ardently pursue to their utmost limits, the investigations of true science, not to expect from her aid a sudden and transforming change in our whole system of agriculture, and not to give heed to the crude speculations of every plausible theorizer. Science may do *much*, but she cannot do *everything*, and some men are disposed to refuse her aid altogether, because she will not pretend to solve all mysteries.

The story of the good woman who went to a place where she had heard chickens were hatched by steam, illustrates the temper of such persons. She was shown the eggs deposited upon cotton in drawers, subjected to the proper degree of heat. "What," she exclaimed indignantly, "hatch chickens out of *eggs*, and that's all—who *couldn't* hatch chickens out of *eggs*?"

Our farmers must bear in mind, that the progress of scientific investigations must be slow and cautious. They must not expect, though theorists suggest it, to manure their fields by *electricity* alone, or to raise fine crops upon flowing sands, by merely *steeping their seed* in some fertilizing compound. The old clergyman's answer to his servant, who asked him to pray for a good crop on a very barren field, was judicious—"No, Sam, I think praying alone will hardly do for *that* piece; we had better give it a little more manure first."

Theorizing and talking about science, are not farming, nor, on the other hand, are a dogged perseverance in old modes of husbandry, and contempt for the aid of the *thinking* men of our day, very sure indications of wisdom.

HENRY F. FRENCH.

Exeter, N. H., Jan. 5, 1894.

SHOULD A REPUBLIC ENCOURAGE THE ARTS?

BY CALVERT VAUX, NEWBURGH, N. Y.

[It has been honestly urged by some of our severest democratic presses, that a government like ours should necessarily confine its duties to making and executing the laws, and that no powers being delegated to it for any other purposes, it has no right to assume them, even for public education by common schools, &c., much less for that species of

higher education which grows out of a direct encouragement of the arts, as having a special influence in enlightening and refining the people at large, by the erection of fine building, galleries of pictures, statuary, &c. The following remarks, from one of our correspondents, have been written in answer to this doctrine, and are worthy of attention. Ed.]

It is argued that the members of a republican government, like that of the United States, being appointed solely for the purpose of carrying out in practice the political will of the people, are not justified, in their official capacity, in devoting either their own time or attention, or the funds of the nation, to any other purpose whatever, and consequently, that the fostering or advancement of the national taste, in matters of art, having nothing to do with politics, is a subject over which the members of the government have no control, and one with which they have no manner of business. This position, according to the strict limitation of the official powers, members are at present delegated to exercise, appears incontestible, and it seems evident that without being anew specially authorized by the people, the government has no right to sanction the expenditure of public time or public money, for any such purpose. It is, however, not uncommon to hear it asserted on this ground, that no outlay of thought or money on national public buildings, is justifiable, beyond what is necessary to procure, in the most commodious, substantial, and economical manner, the accommodation required. Moreover, that architecture demands something beyond skillful planning, sound materials, and good workmanship, and that this "something beyond," not being absolutely requisite for the convenience or stability of the structure proposed to be erected, and having nothing to do with politics, is beyond the province of the government. As this deduction, though plausible, does not seem incontestible, it may be worth while to investigate its merits.

In the first place, then, it seems clear that the providing suitable national buildings, as public exigence requires, is a necessary part of the business of government—there is no other authority by which such works can consistently be set on foot; and it will hardly be denied by any one, that it is a duty of every government to take care that the public is not injured for want of proper attention being bestowed on such matters. Now, the art of building is every way in itself, as far removed from politics as the art of architecture; yet it appears that it may, (or rather must,) become the true policy of every government to have something to do with the art of building—consequently, it is evident that the simple non-connection of any subject with political questions or politics, according to the popular definition of the word, is not of itself, a sufficient reason for its being considered beyond the scope of the government, for the rule that fails in the one case, can scarcely be held binding in the other. Before the consideration of any subject can be rightly ignored on this ground, it must be fairly proved to have no legitimate bearing on any act that the government, in its truly political character, is bound to perform. The representatives of the nation, therefore, being forced, from the nature of the case, to undertake the responsibility of erecting suitable buildings for all the national exigencies of public business—are apparently bound to decide on the claim of architecture to a place in their calculations—not on the ground of its connection or disconnection with political questions, not in any way with reference to the encouragement its admission to consideration may give to art, nor to the effect it may have on the tastes of the people—but simply on the ground of its suitability or unsuitability *per se*, to the particular national buildings they are called on to construct. This view of the matter, if correct, will at once materially narrow the question at issue, if we allow the word suitable to be only properly applied, when used to embody the idea of that perfect special fitness which it is the duty, as well of individuals as of pub-

lic bodies, to aim at expressing in every act, great or small, public or private, which they may essay to perform.

Is architecture then suitable to public buildings? Is it necessary for the purpose of making them "perfect" and "specially fit?"—that is the question, and the only question that properly belongs to the case under consideration. To arrive at any right conclusion on this point, it is clear that the meaning of the word architecture must be fairly understood and allowed beforehand. The most simple and true definition of it, that seems to be attainable, is that it is "the art of the beautiful in building." There seems no ground on which an argument could rest, capable of proving this to be a false definition, and as it is sufficiently intelligible, it seems needless to seek for any other. Taking then this definition as granted to be correct, architecture is the whole art of giving to a building all the beauties or perfections of which it is capable; perfection of plan and perfection of execution (of which buildings are undoubtedly capable) being of course parts of this whole, the remainder, whatever it is, being something beyond these. The first deduction that necessarily follows, is that there is no such thing in existence, or capable of existing, as good building exclusive of architecture; for every quality in a professedly unarchitectural building, that gives it a title to the name of good, is necessarily a perfection or beauty either of convenience or construction; and "all" perfections and beauties in building, being claimed to be the peculiar province of architecture; such a building would not be unarchitectural, but partially architectural, and only good to the extent that it was architectural; this seems to be the true state of the case, and therefore the line drawn just now, for the convenience of argument, between the art of building and the art of architecture, appears to have no real existence, and consequently government, in erecting commodious public buildings, cannot ignore architecture entirely, and its claim to consideration becomes solely a question of degree—a question of how many or how few architectural beauties or perfections are suitable to the building under its control.

The thing then to determine, is, supposing perfection of plan and execution to be provided for in any public building, what is the next perfection of which it is capable? To decide this intelligibly, it may be useful to prove the analogy, if there is any analogy, between the art of the beautiful in building, and another art which may be more easily agreed on, viz: the art of the beautiful in speaking, if there is in fact any practical analogy between architecture and eloquence. In the first place then, they have each one quality in common, that of being effete without being called into existence for a purpose; a building without an object, or a speech without a motive, is simply impertinent. The one, to be sure, has all the primitive quarries, mines, and forests of nature, for its material; the other has but one alphabet of a few letters, for its primary resource.

The next process in the one, is to convert its material into shapes, proved by experience to have single positive qualities suited for single specific purposes, and stones, nails, and timbers are the result; a similar process takes place in the other, and we have words. Combination then takes place in each, for the embodiment of more knowledge. Walls, floors and roofs on the one hand; sentences, clauses, sections, on the other; the result in one is a building, in the other a speech. The analogy seems perfect up to this point, and only fails when attempted to be instituted between the object of the one and the motive of the other. These are different; the object of a building is to embody working facts deduced from principles; the object of a speech, is from working facts already in existence, to hew out principles that shall result in future action. It is in its essence progressive: it acts as the engineer who takes the level, and the pioneer who removes the obstacles in the way of improvement, while it is the mission of architecture to supply the paving stones

that make that way a road fit for convenient use; and in its most extended sense it is the privilege of architecture to embody what is doing, and that only.

A man may surely be justified in saying of a people—give me a list of their buildings, and I will give you a list of their occupations, and the principles that are at work there; but such a list would never show what such a people would do, or what its principles would be at a future time. To form a private opinion on that point, it would be necessary for a man to take up the thread of the argument, where the facts showed that the art of eloquence had left it, and argue the matter out, silently or otherwise, according to the requirements of the latter art. This difference in the analogy which clearly exists, has, however, nothing to do with the machinery or working of either art, and for the purposes of the present case the analogy seems perfect. To place then a public speech on the same artistic footing on which our public building was left previous to this digression, it must first be calculated to achieve its end thoroughly, and be clearly enunciated. Now is there any other perfection that ought, beyond cavil, to find its expression in a public speech? Certainly there is atleast one, and that one is courtesy. A senator, who should defend a rude speech, however forcible, on the ground that he did not consider that the public paid him for occupying his time on such a subject, would be considered foolishly ignorant. A speech, to be good, according to universal acknowledgment, must be, at any rate, both forcible and elegant or courteous. The presence of one quality will not compensate for the absence of the other, and this elegance must not be protruded; it must be inherent, it must be thought of beforehand in every word, clause and sentence, to give satisfaction. No generally offensive speech, will be mended by tacking stereotyped compliments on to it, which would only make it the more insulting; it must achieve its end, and in the process of achieving it, whatever other perfection it may realize, it must at least offend as little as possible; otherwise it is felt to be tyrannical and insupportably selfish, and is justly disliked by all who hear it spoken. Now this deduction may, without the slightest alteration, be applied to every public building; what other perfection it may, beyond convenience and stability, be capable of, it must at least offend as little as possible; otherwise it is felt to be tyrannical and insupportably selfish, and is justly disliked by all who see it built. If the truth of this deduction is granted, the argument may readily be carried forward through all its various stages to this point, that a great public speech on a great public question, affords one of the limited natural opportunities for the highest efforts of the art of eloquence; and if it is right for government to insist on such opportunities being neglected, it is equivalent to affirming that man has been gifted by his Creator with capacity for realising a certain perfection, but that they feel bound in this political position to say they are instructed by the people to consider this an unnecessary gift, and have accordingly made up their minds to strangle every palpable opportunity that occurs for its exercise; and the argument thus carried forward, applies as accurately to architecture as to eloquence, for that the Creator created man with a capacity to develop beauty in buildings, no one will deny; or, according to all rules of consistency, that the buildings for the most valuable and important purposes, are the only proper field for the highest possible developments of that capacity, and therefore the simple case is that the government is placed in the position of asserting that they are instructed by the people to ignore the existence and deny the opportunity for the use of the noblest gifts of the Creator.

One other objection has been raised, and that is, that the admission of the right of government to include, in any way, such subjects as architecture, in its idea of public wants, and to spend public money thereon, has an unavoidable tendency towards corruption in

the state; that it is much better that such matters should be left for free development by the people at large; and that the government should not mix up any irrelevant matters with its own special department.

To take the last expression of pseudo-policy first, it is surely clear, that however it may apply to art or architecture, or *anything* in general, it is manifestly impertinent to the particular case under consideration—the case of a public building—because the people at large, whatever their wish, have no *opportunity* to develop, except through their government, anything in a matter that is unavoidably under the sole control of that government. Therefore, this pseudo-policy points simply to utter non-development in national instances, which alone are being discussed. Next, of the unavoidable tendency to corruption; that is the positive basis of the objection. It is at once confessed that it is not without the bounds of possibility that this objection may be a true one; but if true, let us see what is the position it involves. In the first place, it palpably admits that all the laws are insufficient, either to prevent, detect, or punish dishonesty. If not, why can it not be prevented, or detected and punished, in such a flagrant case as the one under discussion,—one that must of necessity occur under the immediate eye of the very makers and guardians of those laws. In the second place, it asserts that all the professional and business men in the country, whose abilities or interests are connected with the erection of buildings, are *rogues*, for if there is one honest man among them, it is the natural course for faithful agents to see that *he*, at least, is fully employed. In the third place, it asserts that all the members of the government are *rogues*, (corruption pre-supposing collusion.) For if there is one honest man among them, it is the clear policy, even of the dishonest who constitute the remainder, to appoint that one to see that, (in a matter in which they are not individually, as dishonest persons, interested,) they are not injured by the mis-appropriation of funds, that each, in his capacity of a member of the community, is taxed to realize. In the fourth place, it asserts that all the political majorities of the constituencies are *rogues*, for if there is one honest man in any of them, *aye*, or out of any of them, even in the minorities, why is he not elected to the government office, when it must be clear to all the remainder, (rogues though they be,) that he alone has the capacity for acting in a manner disconnected with unprincipled private interest,—the only man, in fact, whom any one of them would feel safe to be any gainer by appointing. The objection then, reduced to its elements, is practically a four-fold accusation against the character of the laws, the professional men, the government, and the people of the United States. This insulting accusation will hardly be allowed, and yet it may be said, “the thing don’t work, it won’t work, it has been proved not to work, and therefore, in spite of all far-fetched conclusions, it is better to get rid of it altogether.” All that can be said to this is, that if it does not work; it is without a particle of doubt because some of those conclusions or accusations, are actual in some point—and whatever that point may be, it is respectfully recommended that it forthwith be discovered, and exhibited to the government as a discredit to the nation, and as an appropriate opportunity for employing any “getting rid” force that may be at hand; and if this course is asserted by objectors to be impossible, it only remains, in the beautiful language of the *immortal bard*, to “pity their ignorance, and despise ‘em for it.”

C. V.

Newburgh, Jan., 1852.

THE PEACH IN THE NORTH—HOW TO TRAIN IT.

BY JOHN SAUL, WASHINGTON, D. C.

It may appear out of place in me to submit any remarks on the peach, to cultivators in this country, where this fruit is cultivated to such an unlimited extent. The best manner of training this tree, is what I particularly wish to notice, conceiving it may be useful in several of the northern states; though not required in the middle or southern states, from the great ease and little care with which this delicious fruit can be grown in its bounteous soil and fine climate. So freely does it grow, that it can be scarcely called cultivated. I have been particularly struck with, 1st. The great extent to which they are cultivated. 2d. The little or no attention given in their cultivation. 3d. The immense mass of rubbish called peaches, which are poured into the markets. True, I have seen good fruit, but good was the exception, and by no means the rule; the overwhelming majority, to say the least, were very poor; and this in a soil and climate capable of producing as fine peaches as any region on our globe. If we inquire more minutely into their culture, we shall probably find that the whole routine of culture, from the procuring of the stone to the gathering of the fruit, have been equally bad. The stones probably are procured from any quarter, never caring whether the "Yellows" are prevalent there or not; spring arrives and instead of being planted out at proper distances, they are sown by handfuls in drills, when they are drawn up thick and crowded, the plants choking each other for want of air, and without the proper amount of nourishment for their roots. How can they gain strength or mature their wood under such treatment? The thing is impossible, and now in the first start, in the very infancy of the tree, its constitution is tainted and broken. In those drills they are sometimes budded—without being at any time transplanted, until they are offered to the public, cheap, by the hundred or thousand, and how many persons are there that will buy this cheap stuff rather than give a fair price for well cultivated trees. When they have got them, do all prepare their ground and plant them properly? Alas! I fear the contrary is more generally the case, as is too well known! Planted and growing, are they regularly pruned, the fruit thinned, and every other attention given which the fruit requires? If not, how can we expect the trees will go on, year after year, bearing abundant crops; must we not rather expect that the trees will soon sink into feebleness, sickness and premature decay. I have said the constitution is impaired, or destroyed, in its infancy, and if so, can it ever regain it? Will the child that has been broken down in infancy for want of food and air, form the strongest and most athletic man? I think most persons will answer in the negative. Precisely is it the same with the tree. The Larch is planted as a timber tree to the amount of many millions annually in the mountains of England, Wales, and Scotland. Let us see how these plants are raised. One plan is, sow the seed in beds where it is allowed to remain two years, when they are lifted and planted out; this is a cheap method, but a very bad one, as when the plants have stood two years they become thin and drawn; it has few fibres, but on the contrary a few long tapering roots, which are generally injured when lifted, and when planted take a long time to recover themselves; indeed many die from the check which they receive, so for one or two consecutive seasons, they require the vacancies to be filled up.

Another method is, after the plants have stood one or two years in the seed bed, to plant them out in lines in the nursery, for a year or two, after which they are finally planted out where they are to remain; this is a better system than the first, though not equal to the manner I shall now describe. Sow the seed thinly, in light, well prepared

ground; if they grow well, they should be, by the end of the first year, three or four inches in height: as they are now but one year old, there will be no difficulty in moving them with all the fibres they possess, and setting them out thinly in a well prepared piece of ground: hence, by the end of the second year, they average from twelve to fifteen inches in height. They are now lifted and planted out where they are to remain, and from the transplanting of the first year, they now move with a mass of fibres which strike immediately into the ground, the plants themselves forming shoots the first summer from nine to twelve inches long, and go on after as rapidly as if they had never been moved; when compared to the other two systems, we find they remain stationary, or make very little progress for the first year or two, and never grow so rapidly or fine. I bring the case of the Larch forward, to illustrate my idea of the necessity of growing this, or indeed any other tree, from its infancy, freely and thriftily, without impairing its constitution, from want of food, light, air, or improper checks of any description whatever; once its constitutional strength lost, it can never regain it. Do the breeders of fine animals neglect them while young, and only tend them with care when they arrive at a given age; nothing of the sort—they know full well to their cost, if they are not careful and kind while the animal is young and growing, they never will have anything worth figuring at any of our state fairs.

We will now pass by the youthful days of our trees; but before doing so, I shall make one more remark, bearing upon this point. The growers of plants for the great London exhibitions, in what way do they produce those matchless specimens of cultural skill which surprise every one who sees them? They commence with young, healthy, thrifty plants—any plant that does not possess health and vigor, they would not waste time and attention upon, as it would be *wasted, nothing more*—these are potted liberally, grown in warm, well constructed houses, fumigated, syringed, &c., with every possible attention given to induce a healthy growth for two or three years, during which time they are not allowed to produce a single bloom—there is no check in any shape given. When the plants are of good size and shape, and have concentrated within them, health, strength, and vigor, and are capable of doing what is technically *called work*, they are then, and not till then, allowed to bloom. Should any of the plants look in the least delicate, while passing through this training period, they are immediately destroyed, as it would be considered a waste of time to keep them longer. Hence the great necessity of growing all plants and trees from the first stage of growth, well, full of health and thriftiness, &c. We shall suppose they have been well grown in their early stages, and that the trees are properly and permanently planted out as standards; they should now be regularly pruned, the fruit thinned, &c. How this should be performed, has been so well and so frequently described by Mr. DOWNING, that I shall pass it by. If pruning, thinning, and the other necessities which the trees require, are neglected, they must of necessity soon perish; if people were but to consider the immense draft a heavy crop of peaches must make upon a tree, they would wonder how it was the tree does not die from sheer exhaustion; and if the tree does not perish, it must of necessity become feeble and sickly. I have seen splendid specimens of plants perish after a free bloom, and so well is this known to the exhibitors in England, that many of those magnificent specimens which are shown at Chiswick and Regent's Park, are the day after the show denuded of every bloom. Now, had all this bloom been allowed to remain and die off naturally, the plants would be so enfeebled, that if they had survived at all, they would require a years' repose before they could be brought out in the same trim, or bloom poorly the following season. It is well known the most delicious fruits are the most delicate, and require the greatest amount of care. The highest bred

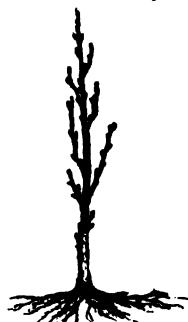
animals require more care and attention than those of their race of inferior qualities. In flowers we find it the same. The common Pansy will survive a winter in the northern states, while their cousins, which have been so much improved in size, shape, substance, and color, require the highest state of pot culture in cool pits, in England. Geraniums, as they have been improved by Mr. Beck and others, must have more care than the common old varieties, and those lovely fancy varieties which have come much into culture of late, require still more care, as well as cultural skill, to grow them in anything like perfection. The common clove pink will grow freely in the borders of our flower gardens, but the delicate flaked carnation, and the beautiful yellow picotee, if to be grown well, or at all, must be managed very differently. And so must our delicious peaches, if we wish the fruit fine, want to have the trees in health and vigor, and prolong their lives, a good routine of culture must be pursued, or disease will soon manifest itself. It has frequently been urged by excellent writers, to procure the stones from which stocks are raised, from healthy districts, and this cannot be too often recommended, as the good or bad qualities of the parent will be inherited by the offspring. The growers of oak in England, invariably procure their acorns from the finest trees, and will not use those from small stunted scrubs, and at the present day, many growers procure their Larch seed from Tyrol—the native home of the Larch—in preference to seed raised in Britain. I could run through many other instances of the kind, showing the great necessity of having seed from the healthiest districts. Florists that excel in raising seedling geraniums, pansies, &c., not only save their seed from varieties of first rate qualities, but the individual blooms from which the seed is saved must be as near perfection as possible, and whilst in flower no other bloom of inferior qualities, of that or any other varieties, is allowed to exist, lest the bees may frustrate the object in view, by taking the pollen into the flower which is intended for seeding. Of no less importance is it, that buds should be taken from a healthy source, as they will assuredly perpetuate and transmit the strength and vigor, or disease of the parent. This holds good through the whole range of the animal and vegetable kingdoms, and is particularly conspicuous in fruit trees, ornamental trees, flowering plants, &c. Hunt's large Tawny Nectarine was raised from thrifty, free growing young plants of the "old Tawny." Most variegated trees, with many of the pendulous, have been produced by accidental branches on trees of their species, produced by sickness, insects, and other causes; yet all these, with the greatest certainty, are perpetuated by budding and grafting. The Mogador (D. P.) Rose is said to be a sport from the Crimson Perpetual, or Du Roi, yet it re-produces itself with certainty by budding, and is more vigorous in growth than the parent. The Clifton White Moss Rose was produced by a sucker from the old Pink Moss; it is the best white moss, but extremely delicate in its habit, and difficult to grow well. When it does grow well, it is predisposed to sport again, into what is called the Blush Moss. We have another sport in the same line, Unique White Moss, which has been produced by the old Unique Rose—parent and offspring being of the same color, the growth is much about the same, whilst the mossy character of the latter remains constant. In budding or grafting, we perpetuate all the good or bad qualities of the parents, as much, if not more than by seed raised from the latter; all highly cultivated fruits will vary to a considerable extent, whereas, by budding or grafting, we perpetuate them with the greatest accuracy.

It is well known that in England all peaches and nectarines are worked upon plum stocks; the climate being excessively moist, with cool summers, when upon its own stock the tree grows very thriftily; the wood is never matured properly; the autumn finds them full of crude sap, branches, stem and roots, and the following spring the tree will be found

in a lamentable state of disease, being one mass of canker, gum and rottenness. To avoid this, recourse is had to the plum stock. And here much judgment and experience is necessary, as varieties of peaches demand peculiar stocks; what are termed French peaches, are generally worked on what is called the pear plum stock, a variety of slow growth, but one upon which these peaches appear to succeed well; the Muscle plum stock is a variety of much stronger growth, and on it are worked all the other sorts of peaches, with most nectarines; upon it they grow admirably, though the constitution of the French Peach is such that they will not take upon this stock. Mr. RIVZAS uses a stock upon which all peaches grow finely. Formerly a stock was in cultivation called the Brompton Plum, a variety of very thrifty growth, but on which the peach was pre-disposed to disease, and on which it did not live long; this variety is now little used, and no English gardener that knows anything about peaches, would think of planting a tree if it were on this stock.

Let us now see in what way they are prepared for working. Small stocks are bedded out in good ground; here they stand two years; at the expiration of the second year, they are cut down to the ground level; the following season they throw up fine clean shoots, three to four feet in height, and by the end of this year, they are taken up and planted out in the nursery lines for budding; every workman can perceive how much easier and better such young stuff can be budded, than stocks that may have taken the same, or even a less amount of time, to grow, but had not been headed down. Standard peaches and nectarines are generally budded at a height of from five to six feet, on the stock. The latter is grown for the purpose in this way: strong stocks are lined out in the nursery, in the same way as when they are intended for working dwarfs upon; here they are allowed to stand and grow two years; when they are cut even with the surface of the ground, they will throw up shoots from five to seven feet that summer; many will be fit to bud the same season, at a height of five or six feet, and the remainder the following summer. I have been thus particular in describing how this tree is raised in England, contrasted with the ease with which it may be cultivated here. I say ease, for the best culture which we can give it here, will be easy in comparison with its cultivation there. See what care is there required in selecting stocks suited to the varieties; next, the preparation which these stocks undergo to have them healthy and thrifty to receive the buds; and as we proceed we shall find the after treatment is equally assiduous; care, attention, and labor being as little spared. Here is the proper place to notice stocks, for this climate, and where this tree succeeds on its own roots there unquestionably is nothing better, if there is any thing as good; but in some of the northern states the plum stock may be useful; here, however, the stock must be of such a nature, that the peach will take and grow freely upon, and be likely to last; for the more delicate varieties of peaches, a stock of moderate growth should be used; time and experience alone can however determine which varieties will answer this purpose best, and which the varieties of peaches will grow upon.

I have extended these introductory remarks longer than I intended when I commenced, but I hope if I have made a digression it may be useful in its way. We shall now turn to the other part, and that which more immediately concerns us at present—the proper training of the tree. When the latter are purchased in the nursery, they should be young, clean and thrifty; one year old from the bud is best; if older, when headed back they do not break free; they will have the appearance of No. 1. In the present day I should hope no person would think of planting these or any other valuable trees with



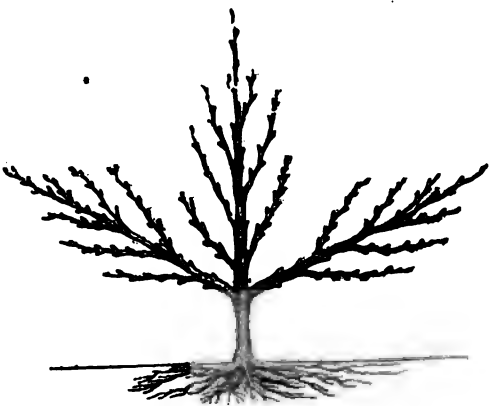
No. 1—the tree as received from the nursery.

out trenching, draining, and otherwise preparing the ground for their reception. Were I to enter into a description of the manner in which ground is made and prepared for the reception of these trees in England, it would surprise many. However, I take for granted our ground is properly prepared, and our trees planted; the latter operation I think is best performed in autumn; except for a very cold northern latitude, when perhaps early in spring is preferable; after planting, the heads may be lightened, but not cut fully back until spring; early in the latter season, say when the sap is about to move, let the plants be headed back to within three eyes of the place where it had been budded as shown in No. 2. As soon as these three eyes break, and the shoots are of sufficient length, they must be secured carefully to the trellis to which they are to be trained; they should be constantly watched when growing, that the shoots may not be injured by insects or other causes, as the loss of a branch would now be of vital importance to the future symmetry of the tree; all the lateral or summer shoots which these produce should be allowed to grow, and secured in the same way as the principal branches.



No. 2.—Headed down the first spring after planting.

As during the season of growth there is a reciprocal action carried on between the roots and branches, the numbers of the former will be regulated by the proportions of the latter. The amount of healthy foliage which a tree possesses, is also of paramount importance, leaves being the functions of respiration and digestion; the numerous fibres of a free growing peach tree collect an immense quantity of crude matter, which is propelled into the leaves; here it is digested and assimilated, and is prepared to become the wood of the tree. Now, if we had not an amount of foliage equivalent to the amount of roots, how would matters stand? Something in this way; the roots, as in the other case, would collect food, force it into the stem and branches, but not having a sufficiency of leaves to elaborate the sap, it remains in the pores of the tree, in a crude, indigested state; the following autumn arrives, and what shall we find? A tree with, it may be, strong wood, but that so sappy and unripened, that ere spring arrives it will be a mass of gum and canker. Let us now see what appearance our trees will present that had an abundance of healthy foliage, and which well performed their allotted offices under the bright light and intense heat of our fine summers. In the autumn we find the branches well ripened, ruddy in color, and as firm as a piece of oak; our young trees will now have concentrated within them, health and strength, and will have the appearance of No. 3. Perhaps I should have remarked when the trees had been planted, they should be well mulched with long stable litter, which should be left on through the summer, as it is of great benefit in keeping the roots moist; should the weather prove dry in early spring, a few good soakings of liquid manure will benefit them. Early in the spring of the second year, our trees must again be headed down, as shown in No 4, to two eyes, and as our tree is by this time pretty well established, it will break with considerable vigor.



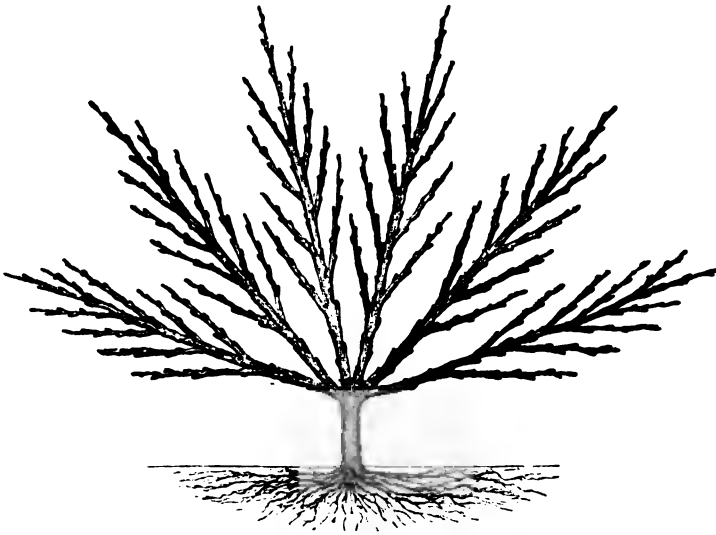
No. 3.—As it appears after its first year's growth.

The previous year I called attention to the great necessity of vigilance and care being given

to the tree at the time of the shoots breaking, and if anything, it will require more vigilance now; allow these soft young shoots to be now injured, and the symmetry of the tree is irretrievably lost; on the other hand, lay in and tie these shoots with care and in good time, and we shall accomplish much towards the perfect shape of our future tree. It will be observed in the past year we had but three branches, which had been headed down in spring to two eyes each; we have, therefore, now six branches, which must be trained at full length with all the laterals, (or summer shoots;) for the reasons assigned last year, insects must be guarded against, as well as anything that would injure the tree or its foliage; mulching the roots, with occasionally a good watering of liquid manure, will very much assist it; by the end of this (second) summer it will have the appearance of No.



No. 4—Headed down in spring of second year.



No. 5—The appearance of the tree at the expiration of the second year.

5. Here now we have a tree, healthy, strong, and thrifty, with abundance of roots, a clean stem, well formed, well ripened branches, and capable of being moulded into a beautiful tree in the coming year. Some will perhaps say, our tree is now too thrifty. But this phrase "too thrifty," I do not well comprehend; if by this they mean long, thick, gory, unripened shoots, they may call it "*too thrifty*" if they please, and they may consider such wood on their trees anything but desirable, but if the system I am describing is properly carried out, the wood will be of a very different character.

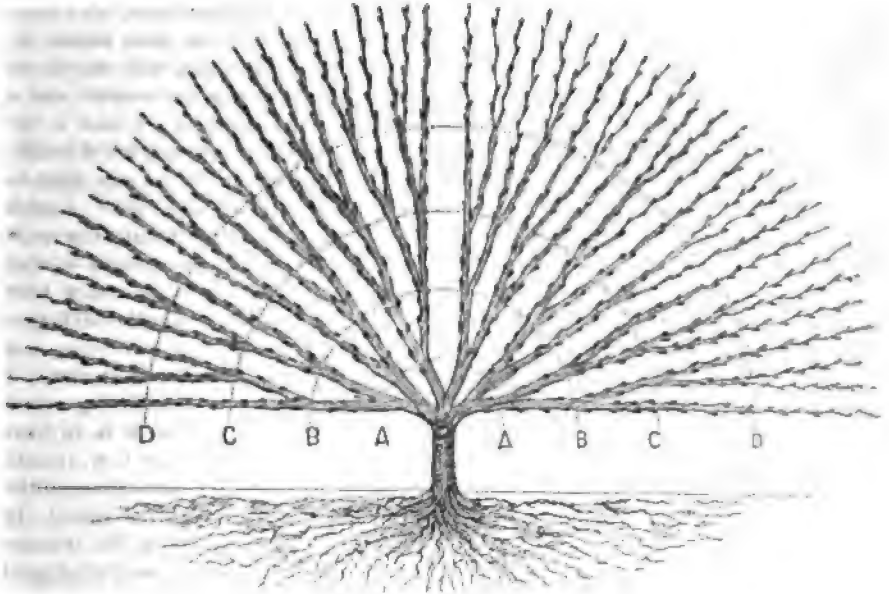
In place of spongy, soft unripened shoots, their tissues will be firm, well matured, and as ripe as sun and heat can make them, and under conditions such as these, I say there can be no such thing as "too thrifty." I can well understand in a climate such as England, where the digestive and respiratory organs of plants perform their offices slowly, and but too frequently imperfectly, over luxuriant growth is to be guarded against, and wood more moderate in size is desirable, in order to meet the quantity of pure air and elaborated sap. But in the original eastern home of the peach, this will not hold good, nor will it in our own warm sunny climate, which so closely resembles the seasons of its native land. Here revelling in the heat and bright sunshine, the foliage will digest and as-

assimilate almost any quantity of sap which is propelled into them, there being nothing to impede their healthy action. I think this may be illustrated in another way; in cold northern climates, the Laplanders will eat whale blubber, and drink train oil, which to our taste is not very palatable; yet we live upon strong and nutritious food, when compared to the effeminate Hindoo, who in the warm atmosphere of India, feeds almost exclusively on rice. This shows that man requires to be fed in accordance with the climate in which he lives, but this is generally acknowledged as regards man and animals, and a little reflection will show it is as strictly true of the vegetable kingdom. I said a tree cannot be "too thrifty" if the wood is properly matured, the tree clean and full of health, with abundance of roots in well prepared ground, near the surface. Do persons object to fruit being over large, if the flavor is of as good quality as those of smaller size? I think not. Again florists have rules by which they judge what are termed "florist flowers;" after all the various points are stated, the last comes is size, which is generally worded something in this way, "the larger a flower is, provided it possesses all the other good qualities, the better." Now in what way is this large fruit grown? Has Mr. Mills produced his monstrous pine from little plants? The contrary: his plants were large, and would indeed be called thrifty. Are the finest grapes grown produced by weak canes? I think not. Those who have read Mr. CUTHILL's articles on market gardening round London, will judge if the growers of monstrous strawberries, know what it is to have their plants too thrifty. I might now pass through florist flowers, and show how strength is concentrated in the plants which produce such perfect blooms. But let us glance a little at the animal kingdom. I have yet to learn if the raisers of that beautiful animal, the horse, object to size, if the animal possesses every other good point. Will the breeders of Short-horned and Hereford cattle object to size, combining with it every other good point? Those who raise the fine Leicester sheep, will, I am sure, be pleased with size, combining with it the other qualities. In the same way I may pass through many more, but the above will illustrate my meaning. When, therefore, I hear of "too thrifty," I understand something like the following: *A rank luxuriant tree, full of sappy plethoric shoots, unripened and incapable of being matured, with the roots in an undrained, cold or wet soil.* But planted in a proper soil, with good after cultivation, so as to have our wood, as it should be, properly matured, we shall know nothing of "too thrifty." At the close of the second autumn, the trees we said would have the appearance of No. 5, and by this time it is evident we have an amount of strength concentrated in the tree and its roots; the latter will be most numerous, strong, healthy, and active. The following spring our tree will once more be headed down to two eyes, to a shoot, as shown in No. 6. As we had last year six shoots we shall now have twelve; as soon as these advance in growth, sufficient to receive a tie, they should be secured to the trellis or whatever it is intended they should be trained to; on starting in the past year, I noticed the great amount of care necessary for the preservation of the shoots, lest the symmetry may be destroyed, and more imperatively necessary is care and vigilance now; the loss of a shoot is now irreparable, and no after skill or judgment can properly supply its place. When the shoots have attained from 15 to 18 inches in length, let the extreme points of all be stopped as shown in No. 7, B. B. This and all subsequent stoppings must be performed on the soft watery points of the shoots; they will then break as freely as though they had not been stopped at all, whereas if the shoots



No. 6.—Headed down in spring of third year.

once become firm, they break with more difficulty, and take a longer time. From the points B.B. where the shoots had been stopped, several branches will break, but not more than two should be suffered to grow from each shoot; that number will be sufficient to fill



No. 7—The perfect tree at the end of the third year, capable of producing a fruit crop the following season.

up the tree, allowing the wood a proper distance; and in some cases where the wood appears to be getting too thick or crowded, only one shoot should be allowed to grow; when these have again reached the length of 15 or 18 inches, another stopping takes place at C.C., in precisely the same way as the former (at B.B.,) allowing about the same number of shoots to grow; on these becoming once more 15 to 18 inches in length, a stopping for the third time will be required at D.D., and the shoots laid in as in the former stoppings. These stoppings will in general be sufficient for ordinary trees, but in the case of very strong trees they will require four, and ripen the whole of the wood well. I have said from 15 to 18 inches between each stopping, but it may in particular cases require a little more or less in order to properly regulate the wood over the trellis as well as to preserve the symmetry of the tree. I take for granted whilst this stopping has been going on, no care was wanting to preserve the shoots and leaves, clean, healthy, and free from insects. At the expiration of our third year the tree has the appearance of No. 7, and will have covered a great many square feet of trellis; it is now full of bearing wood from the stem of the tree to the extremities of the branches, all of which will be properly ripened and matured; the latter is accomplished in England on walls, and there will not be the least difficulty in the splendid climate we here possess. In the spring of the fourth year, the tree demands but little pruning, merely shortening the extremities of the shoots from six to nine or twelve inches, as may be found necessary; our trees are now strong and thrifty; they are also beautifully symmetrical, and we may now expect an abundant crop; at the same time I would entreat of every grower, not to be over severe on his trees by allowing them to bear too freely; rather err upon the opposite side, by well thinning the fruit; by this means the fruit will be more beautiful, and the trees preserved in thrifty growth.

This fourth season young wood must be laid in all over the tree,—say a shoot where each stopping took place, and one equidistant between these stoppings. The extremities of the branches must be trained out; in the case of all moderate growing trees they will require nothing more, but in very thrifty ones they should have one stopping as in the previous year. The future treatment of those trees will be the same as for all trees on trellises—namely, laying in young wood through summer; shortening and thinning it out in the early spring, and the usual routine of culture. A person glancing at the system of training which I have been endeavoring to elucidate, will, if they are acquainted with the fan systems of training, soon perceive a marked difference between that and this; under that system shoots are only partially shortened after the first and second year's growth, and some branches, as may be expected, grow much stronger, and after much care and labor, the symmetry of the tree is frequently lost by one or two branches growing much stronger than the others, when the tree becomes what is called one sided; this can never be the case under the system I have been describing, with a moderate amount of care. Under the old system a few fruit may be had on the third year, whilst under this system none will be had until the fourth.

This to some may appear an advantage, but it really is none, as the crop on the new system, the fourth, and all subsequent years, will be much greater than on the old, and the trees more thrifty and beautiful; the few fruit, therefore, obtained the third year, is not worth considering.

In laying before the readers of the *Horticulturist* the foregoing system of training, I must be understood it is not one of my own invention, but is that carried out by one of the *best practical gardeners in England*—Mr. T. HATCH, late gardener to P. J. MILES, Esq., Leigh Court, near Bristol; his fruit has been invariably abundant and fine, and his trees among the finest specimens in England, more beautiful and regular on the walls than any pencil can trace them on paper.

How frequently is a crop of fruit lost by having the flowers destroyed by frost, and bad weather, when in bloom. Now this may be prevented to a very great extent, and at trifling cost, with the trained fruit trees, or indeed any moderate sized specimens. Let us examine into the *cause* of failure, and we shall be better enabled to find a cure; and if the trees are healthy, it generally takes place in this way. On the disappearance of winter, say the end of March or beginning of April—it of course varies with season and locality—very frequently there are some warm sunny days which speedily bring peaches, nectarines and apricots into bloom, and this is frequently followed by weather cold and unpropitious, which totally destroys the bloom. If the trees, on the first approach of fine weather, had been protected by day from the sun, and kept cool, exposing them freely by night, the trees will be retarded in their blooming until a period much later than they otherwise would have been, and they will set a crop with much greater certainty. Mats, cheap muslin, or in fact any material to protect them from the sun, will answer this purpose. The common practice is to have the fruit trees come naturally into bloom, and when in this state to protect them by night, and also by day, in bad weather. Now the trees should be carefully protected from sun by day, and exposed at night—on the first approach of warm days in early spring—that they may be retarded to as late a period as possible. When the trees are bursting into bloom, reverse cautiously your treatment, and protect by night your expanded blooms, and cold bad days—through the day expose them to the genial influence of light and air, and abundant crops will repay the cultivator. Protection, many may imagine to be very expensive, or in other words, “will not pay,” but let them try it on their best fruits, and their moderate sized trees. There are many things which

may be had cheaply, that will answer the purpose, and the amount of labor is not great. I feel confident as to the result.

J. S.

Washington, D. C., Jan. 5, 1892.

MORE ABOUT THE SAGE GRAPE.

BY TWO CORRESPONDENTS.

THE letter of our correspondent, Mr. SHELDON, calling our attention to specimens of this native grape, and showing conclusively how it has been over-rated, which was published in our December number, has called out the two following letters—which we publish to settle the matter.

A. J. DOWNING, Esq.—In the December number of the *Horticulturist*, one of your correspondents and yourself, unite in denouncing the Sage Grape as a “humbug.” It is true, there are a great many humbugs in horticulture. There is one large class, too formidable to be killed by mere exposure, but which taxes oppressively all the energies and vigilance of the cultivator to avert their ravages, even when he has discovered their mode and point of attack. The other, (which may be called the moral class,) is not quite so numerous, but will fly quite as fast—sometimes hard to detect, but when once discovered, just holding them up to the light destroys them in a trice. Neither class escapes your notice—and it should be so, for in some cases it is hard to tell which are the most mischievous and aggravating.

The public have so often been bitten by this *im-moral* class of humbugs, that they are afraid of anything which has been dubbed humbug, (which, by the way, are a progeny of the big-bugs,) and shun it without examination.

But I must object to your calling the Sage Grape by this unenviable cognomen in so much of a hurry. I have seen the grape from the original vine; have frequently eaten of them raised here; numerous friends and neighbors have tasted them; specimens have been sent to the conductors of the most respectable Journals of Agriculture, and to pomological writers, in our state. All, without exception, have pronounced them “good, excellent, sweet, possessing valuable qualities,” &c., &c. Besides all this, the grape in question is *black* as the Isabella, instead of being light colored. A commendatory notice of the press first brought the grape into notice here.

A knowledge of these facts induces me to think that the “light colored variety” sent you, was either not the Sage Grape, or unripe specimens. Possibly the editor and his amateur correspondent, have been “sat upon” by some horticultural friends, and had Black Hamburgs administered to them till they have lost all consciousness of the fitness or worth of any native grape for the table.

When the *Horticulturist* containing the Sage Grape humbug was issued, a friend of mine happened to be in a town some fifty miles distant, where vines of this grape are in successful cultivation, and was suddenly accosted with, “well the Sage Grape is blown up—it is all an exploded humbug.” On being asked on whose authority, was told by the editor and correspondent of the last *Horticulturist*—and immediately added, “I don’t care for that—my vine has fruited, and the fruit was good—I am satisfied.” This man, like your correspondent, was induced to procure a vine by the description in ALLEN’s work. It seems in inducements they agree, in tastes they differ.

I earnestly insist upon these facts being placed before your readers in the pages of the

Horticulturist, that the testimony on both sides may be "in" before the honest reputation of the Sage Grape, (which has been steadily extending for five years,) be summarily consigned to disgrace.

I very well know the Editor's almost world-wide renown for a just and discriminating taste in every thing connected with horticulture and rural architecture. But I have heard it deferentially intimated, that when he penned the article on the Sage Grape, his literary taste was not quite so exquisite.

Please accept these remarks from a lover of the Horticulturist, and

A SUBSCRIBER FROM THE BEGINNING.

Groton, Jan. 5, 1852.

P. S. If you desire, or will venture another examination, I should like to send you specimens from here next autumn. [Should be very glad to receive them.]

REMARKS.—As Mr. ALLEN's book on the grapevine is the authority on the subject of the Sage Grape, and as the disappointment in this variety arises from a comparison of the merits of the grape itself, with the account there given, we shall refer to the work itself, in order to get at the truth of the matter.

Mr. ALLEN does not himself, describe the Sage Grape. He never saw it. He merely says—"it is represented to be of a lilac color." He quotes three letters from Mr. SAGE, himself, describing the variety—a native grape found growing on the margin of a small stream in Maine. The color of the fruit he does not mention. But he says, "the berries are very round, average girth three inches." "They are," he continues, "the richest flavored grapes I have ever tasted. The pulp is very soft, juicy," &c. He concludes by saying, "I speak in confidence when I say that the Sage Grape, properly cultivated, will surpass anything of the grape kind in this country."

What are we to understand by this? Clearly, that the Sage Grape ought to surpass Black Hamburgs, Muscats, and all the most delicious foreign grapes, for they are in this country. But we had seriously no idea of comparing any native grapes in this way, and therefore we expected it, from the description, to surpass the Catawba and Isabella, or at least compare with them. Now two things place the latter most excellent native grapes far below the best foreign grapes, in the estimation of all good judges; first, the hard pulp (peculiar to all native grapes, though less to those;) second, the foxy or wild aroma. The Sage Grape, according to the specimens we received through Mr. SHELDON, from Mr. SAGE himself, is a genuine wild fox grape, common enough in the woods of New-York, very large, round, very foxy in smell, and intolerably hard in the pulp. To compare such a grape as this with Black Hamburg, is simply as absurd as to compare a choke pear with a Seckel. There may be, and we have indeed seen people, who like choke pears, and we are not going to quarrel with them for their taste—but that does not prove that the majority are wrong in preferring Black Hamburgs.

We have no doubt that Mr. SAGE wrote his account of the grape that bears his name, in good faith; but when he said that it would surpass "anything of the grape kind in this country," he ought to have added the following:—P. S. I have never tasted any good grapes.

We have had this very same pale fox grape sent to us from various parts of the country, by persons who extolled it as a native white grape of wonderful size and most delicious flavor.

The merit of this pale red fox grape is solely confined to its excellence for making jellies, a merit well known in the middle states. For the table, it is neither more or less than a humbug. If our correspondent thinks the grape is black, he has evidently not got the

true Sage grape, or else Mr. SAGE himself has not, because, as the following letter from another part of the country will show, he has sent the fruit to others, and with the like results. ED.

DEAR SIR—Being a constant reader of the Horticulturist, I occasionally meet with an article, to which I am tempted to reply. Such an one is contained in the December number of the Horticulturist, (p. 575) in reference to the celebrated Sage grape, so highly praised by Mr. ALLEN in his work on the vine, which work fell into my possession soon after it first came out.

On seeing the Sage grape therein described, (as would be the case with almost any green one) I immediately ordered a vine, which is now well established, and should bear handsomely by next summer; but like others, (as I understand,) I could not wait to see the fruit on my vine, (which by the way cost me just \$5, by the time I received it,) I ordered a box of the fruit from Mr. H. E. SAGE, of Portland, Conn., the originator of it. With what impatience I awaited them, can well be imagined by any one who has read Mr. SAGE's descriptions of it in Allen's work. They came, in sound order; before opening the box however, I smelt a fox, but here they were, to me to a tune of a dollar and fifty cents; as freight on the box, which had in it about three quarts of the Sage grapes, exclusive of the price of the grapes, (a bill for which has never been sent me yet.) On opening the box, I was really surprised at the enormous size of the fruit, but on tasting them!—you have tasted and described them, Mr. DOWNING, that will do. It would have tickled one who has eaten good grapes, too see the watery eyes and coughing fits, that about a dozen of the largest of the grapes caused among a party, where I first opened the box. I had written to N. LONGWORTH, Esq., on the subject of this grape; he stated that he had seen it about Philadelphia, that it was "*a full blooded Fox grape, and might answer as musket balls in time of war,*" which was, in my opinion, a pretty appropriate remark. If I had my choice to be shot with one of them, or swallow half a dozen, I of course would prefer the latter punishment however.

An old saying is, give every dog his due. As a table or wine grape the Sage will always be excluded; but here let me say in its favor (for it will be roughly handled, which indeed the grape individually can very well bear,) that, for making excellent *jelly*, it has in my estimation no superior, if even an equal; while grapes of a much finer quality for eating, or wine, make a very thin juice, and must be boiled down to give body, the Sage grape makes a thick syrup, and retains a peculiar aroma which suits exceedingly. I only mention this quality of the Sage grape, as a sort of plea of compassion, as we all know a falling reputation receives a kick from every one. If the Sage grape is as good a bearer as it has been represented, I think, honestly, one vine might be well worth cultivation.

Yours respectfully,

SAMUEL MILLER.

Union Cottage, N. Leb., Dec. 26, 1851.

SELECTIONS OF BEST FRUITS.

BY P. P., NEW-YORK.

WHAT is the question, Mr. EDITOR, that more of your correspondents are likely to ask about this time of year, than any other? "What are the best Fruits?" They are busy with head-work, while the ground is frozen up—planting orchards and fruit gardens in imagination; just as some people build castles in the air. They sit by the fire-side, with

fruit books and nursery catalogues in hand; they make notes of sorts that are "delicious," "first rate," "melting," "sugary," "excellent," &c. They stock their future garden with everything rare and wonderful, and giving full reins to their imagination, they see that garden full of bearing trees, laden in the spring with blossoms white as snow, and in the autumn with baskets upon baskets of golden and ruddy pears and pippins. This is the way amateurs and young planters "count their chickens before they are hatched."

In my humble opinion, the beginners in fruit culture would be immensely the gainers, if the old veteran horticulturists among your subscribers, would all come out and give their lists of the best fruits. I mean those who have "seen the elephant," i. e., bought and imported most of the new French pears, and all other fruits that stand high on the pages of foreign catalogues. All such know how much *chaff* there is to a basket of sound wheat, and if they would but come out and state what is really good, it might save the rising generation of planters all the trouble of trying experiments, losing time, and wasting valuable ground, that they mostly fall into. There is little doubt in my mind, that of the millions of fruit trees planted in this country in the last fifteen years, two-thirds are of very indifferent quality—not worthy of ground room and cultivation. I shall, therefore, give you a few rough notes of some sorts that I *knew* to be worthy of a place in every fruit garden of considerable size, at least in the northern states.

PEARS.—I place pears first, because they are my favorite fruit. To begin, I would plant but three early summer pears, viz: the Dearborn's Seedling—always a sure and most abundant bearer, and the fruit always fair, sprightly and of excellent flavor; the Rostiezer, from its sweet and pleasant flavor, and hardy habit; the Bartlett—the handsomest of pears, and most popular from its fine quality, free growth, and sure productiveness. These are all reliable standard sorts everywhere, and as the first ripens in August, the second early in September, and the third the last of September, they fill up the season well till the autumn pears come in.

Of autumn pears I would choose six. First, the Belle Lucrative, (on quince,) because of its most delicious, *honeyed* flavor—so much prized at the dessert. Then the Paradise of Autumn, for its handsome size and first rate quality; then the Louise Bonne of Jersey, for its sprightly juicy fruit, and its productiveness; then the Beurre d'Anjou, for size, flavor and productiveness; then the Duchess of Angouleme, (on quince,) as the finest show pear; and finally the Seckel, as the *unapproachable* in flavor, and all other good points. I have not included the Doyennes—white and gray, because they will not thrive well, except in *new* soils—but where they will thrive, they should be placed *before* nearly all others. Of winter pears, I would recommend four. Beurre d'Arenberg—hardy, very productive, with a pine apple flavor; the Lawrence, handsome, and very sure, and good; the Winter Nelis, sweet and excellent, and the New Gray Winter Beurre, with its rich Brown Beurre flavor. The Beurre d'Arenberg and the Lawrence may be gathered and put away to ripen, with no more care than winter apples—and that is more than can be said of any other sorts.

So much for pears; the list is small, I know, but it is much easier to make a large list than a small one—for obvious reasons, and those who want more can either *double* the number of trees of these sorts, (my advice,) or add others of less merit.

Let us see what we can do with apples. For early apples I choose four sorts. The Early Harvest—which is the prince of all summer sorts, both for the table and for cooking; the Early Strawberry, for excellence and beauty; the Summer Bellefleur, for its delicate, rich flavor; and the American Summer Pearmain, for its beauty and excellence in all respects. Of autumn apples, I will only name four, as we have so many other fruits

for the table at that season. The first of these shall be the true Fall Pippin—the largest, handsomest, and finest of all fall apples; the Gravenstein, for its beauty, excellence, and productiveness; the Porter, for its standard qualities and the great crop it gives, and the Golden Sweet, for those who like a sweet apple of the first class.

Of winter apples we must have more—as they are the fruits to stand by when everything else fails us. Let us begin with the Yellow and Green Newtown Pippins—the best apples in the wide world; then the Melon Apple—as being the most sprightly and refreshing of all for the table; then the Mother Apple—rich in flavor; then the Golden Bellflower, a productive and refreshing tart apple; then the Ladies' Sweet—the best of sweet apples; then the Fameuse, so snowy white within, and so excellent; then the Dutch Mignonne, the highest flavored large apple; the Rhode Island Greening, for the table and all culinary purposes; the Esopus Spitzenberg, for its rich, crisp texture, and high flavor; the Swaar, for its fine golden color, and aromatic taste; the Baldwin, for many good qualities; the Roxbury Russet and the Rawles Janet, as the two best very late apples. Every one at the north will add to this select list, the Northern Spy, and every one at the west, the Pryor's Red.

Let us next winnow the Cherries. Of tender cherries, let us say May Duke, Rivers' Amber, Elton, Black Tartarian, Downer's Late, as among the best. Of the firmer fleshed cherries, let us say Rockport Bigarreau and Yellow Spanish. To these we ought to add two cherries of the Mayduke family—very desirable; first, the Reine Hortense, large bright red, sub-acid, nearly sweet, and excellent; and Belle Magnifique, acid, late, handsome for preserving, and very productive.

Nobody wants many Apricots or Nectarines. It may be as well to say that the best sorts for hardy culture, are the Downton and Elruge Nectarines; and the Breda and Large Early Apricots.

It is not worth while to plant many PLUMS, unless the soil is stiff and clayey, or it is found from experience that the curculio is not at hand to spoil your crop, annually. The ten varieties I would name as most valuable for general purposes, out of fifty or more that I have tried, are the following: Green Gage, Purple Favorite, Smith's Orleans, Red Diaper, Imperial Gage, Jefferson, Lombard, Washington, Imperial Ottoman, and Reine Claude d'Bavay.

Neither will any old cultivator multiply names in Peaches. Better to have fine trees of the two good sorts, than five more indifferent sorts, for variety. The best early freestone are Early York, (serrate,) Cooledge's Favorite, George Fourth, Haine's Early; the late freestones are Old Mixon, Snow, Late Admirable, Druid Hill. A tree or two of large White Cling, and if your soil is warm, of Heath Cherry, should find a place in every garden.

I will not go into the smaller fruits at present. Enough has probably been given to throw a little of the light of practical experience upon the long lists which the beginner has to select from, to help him from being altogether lost in the Dismal Swamp of hard names. And he may at least feel sure that every sort that I have named, has been well proved in the climate of New-York state.

Yours respectfully.

P. P.

NOTES ON LANDSCAPE GARDENING.

BY THOS. MEEHAN, PHILADELPHIA.

DEAR SIR—Landscape gardening is a source of the highest pleasure to those who patronise it. Those who hold pleasure to be the result of mere accident, do landscape gardening a great injustice. Pleasure is the result of laws as fixed as those which produce heat and light, rest or motion. So, the more clearly the true principles of landscape gardening are understood, the more perfectly are we enabled to know how they can be applied to the production of the highest degree of pleasure the art can afford.

Extensive gardens are being formed everywhere. The fund of pleasure their originators are laying up for themselves, will be great. That fund would be infinitesimally greater, if more definite ideas of the sources of pleasure in gardening existed.

It has become very general for those who originate new gardens, to be their own landscape gardeners. Were every one born an artist, any one might justly deem himself capable of laying out his own place in a manner capable of affording ultimately the highest pleasure; but it is not so. There are innumerable instances of gardens among the newer places, which afford no pleasure to any one, and which the proprietors themselves, feel to be a dead weight upon their enjoyments, and their purses, from no other cause than ignorance of the very alphabet of landscape gardening, in those who originally projected them. For a time they were interesting from their novelty, till, like the novelty of children's toys, they no longer pleased, and were eventually cast aside for other novelties, and became an incumbrance. In excuse or toleration of such misfortunes, it is often said that every man derives most pleasure from "doing what he likes with his own." Any man might feel some pleasure in deciding to cut with his own hand, a "Greek Slave" in a block of marble,—but I guess that a more real, a more lasting, and more substantial pleasure, would ensue from the employment of the life-giving chisel of a high artist like HERMAN POWERS, on the senseless block.

I am ashamed to make the comparison. It is ridiculous. Applied to landscape gardening it is more so. It is the work of a higher order of genius, to create a pleasing landscape in its generalities, and in its details, than to form a piece of sculpture of ordinary merit. Genius does not rule so proudly in poetry or music, drawing or painting, as she does in the art of landscape gardening. All other arts are content to imitate or represent nature—but landscape gardening has often to employ in her efforts, the aid of all other arts, and often to create even the very materials out of which she produces her happiest results. Could any produce an equal to the beautiful landscape paintings of CLAUDE LORRAINE? If this be difficult, how much more difficult the aim of the landscape gardener, who has to produce in nature the superiors of the picture? It is difficult to arrange the scenes in a landscape painting, so as to give expression, character, and harmony, to each with the other,—but it is more difficult to arrange these in nature. In a picture, scenes, rarely corresponding—yet beautiful in their correspondence, can be brought and conjoined together with a fascinating effect. The imagination often, indeed, supplies the place of realities. The landscape gardener has a more difficult task. He, too, must bring together, harmoniously and expressively, scenes too beautiful to be often seen in one whole, naturally. His imagination, too, must play, but far more cautiously, than that of the painter—because he has a higher and sterner tribunal to decide the value of his work, than the painter has. Nature deputizes to man her right to sit in judgment on the result of the painter's genius; on that of the landscape gardener she sits herself. Mankind have sympathies, give allow-

ances, make extenuations; their knowledge of the constitution of nature is also limited—thus the painter has less to fear. Nature, herself, whose judgment the landscape gardener dares, judges his works according to the strictest letter of her law. Hence, if it be absurd for any mere amateur to paint his own pictures, under the impression that they would be perfect specimens of the art, it were decidedly more so in the case of one who deemed himself capable of laying out extensive grounds in the most perfect style of art, and consequently of obtaining as much pleasure from his garden as it might be capable of affording.

These gentlemen are at fault. They mar their own enjoyments. But they are not entirely to blame. There are so-called landscape gardeners, with whom everything must be *this*, or it is not natural—that, or it is not beautiful. Whatever stands in the way of *this* or *that*, must come down, must be torn away. *This* tree, that may have stood “a thousand years the battle and the breeze,” must at last fall; *that* “mountain must be removed, and cast into the sea.” Everything must be levelled for the grade of their imagination, which cannot turn to the right or to the left, from the object before it. Few proprietors can stand this ordeal. Few could have the *nerve* of a HAMILTON or a LYON, who could desire and effect the death of a *Quercus peterophylla*—the only known specimen in the world—for the poor equivalent of one more view of a bend of the beautiful Schuylkill—or of those who prefer the one or two year old silver maples, planted with mathematical precision by rule and square, in Penn Square, Philadelphia, to the noble trees that originally flourished there.

Landscape gardening, to be pleasing, must be accommodating. Nature herself, is so. In the plains she will give the Oak, the Beech, the Birch, a giant height and strength; on the hill sides and elevations she checks their luxuriance—while on the mountain summits she reduces them to the rank of mere bushes. They, therefore, who follow the “natural style,” may learn from this, that its results depend on their *application* of natural laws, rather than on any abstract formulas of *lines* or *circles*. Mankind generally run into extremes. Landscape gardening confirms this truth. The old system of squaring all walks, carrying them at right lines and angles, shearing and clipping every tree, and making everything so exactly correspondent, was so very absurd, that in the revulsion of ideas that followed its reformation, a *line* in any way, became an unpardonable offence against the new creed. And it is so to this day. Let it be the work of our generation to make extremes meet. Nature is not all lines or all circles. It is a beautiful mixture of both. The sun, earth, and celestial bodies are round, the dew-drops are round; the rivers and streams bend, and wind, and curve; the eye, the head, the limbs—all show forth in many a modification, cylindrical, bending, and sinuous forms. But yet these are intimately connected with straight lines. The bold, determined looking curves which the branches of an old Tulip Poplar present, are beautiful; but the effect is considerably heightened by the tall and arrow-like straightness of the trunk which supports them; and gaze in admiration as we may, on the rounded symmetry, and curved proportions of some beautiful specimen of human kind, we cannot forget the linear lines, or longitudinal dimensions, that give relief, strength, and body to all the rest. Indeed, there is often beauty in a straight line, a beauty which nature frequently employs and glories in. It is her symbol of *utility*—it is the philosophy which she employs to show *why* she is beautiful. The idea of *utility* is always pleasing—it is diffused throughout all nature; the landscape gardener ought never to lose sight of this. Utility is the basis on which all ornament in nature rests. Whatever in art cannot be shown to be useful, is therefore nothing but extravagance. A perfectly straight line in gardening is useful; though entirely unadorned, would be more

pleasing and more beautiful, than the most graceful curve would be without any useful object, either apparent or real. It is but an one-sided view of nature that denounces the "Quaker-like straightness" of the streets of Philadelphia; but they are beautiful because they are in character and in keeping with a place of labor and of business. There is no beauty in the idea of having to go round the circumference of a circle on a matter of business, instead of driving straight through its diameter, unless there can be beauty in an inconvenience. Nor is it in reason that avenues should be denounced in all circumstances, or all occasions. They are often abominable, but sometimes grand. What could supply the want of the short wide avenue that leads from Walnut-street, Philadelphia, through the square, to the venerable old Hall of Independence? or who would object to the magnificent avenues of live oaks, a hundred years old, that adorn many of the fine plantations in Carolina.

It follows, then, that a curved line is not pleasing, merely because it is a curved line; nor is a straight line to be objected to, merely because of its straightness; either case will depend upon its being in character with its aim and purpose. It is the *expression* that governs the beautiful, and whatever is beautiful must be founded in nature. The landscape gardener has but to give a meaning, has but to stamp an expression of beauty upon his works; then, no matter whether his principles of design be circles, curves, or straightness—whether they be squares or triangles—whether his materials be foreign or indigenous, exotic or native, American or English—his works will please.

I again repeat my conviction, that many gentlemen do not employ professional talent in the laying out of their grounds, because they imagine that their own ideas, tastes, and views cannot be respected—that everything must bend to the exact principles on which the artist he might employ deemed "nature" to rest. Would it not be better to give up this pretension of following nature? Better to follow after nothing, or rather to imitate nothing, but to create for ourselves? It is folly to pretend that we can make our work appear to have been done by "nature herself." Let us *avow* our art. We value a picture because we know it is a picture, and not that we believe we are looking at something real; in like manner let us wish not merely to have our work valued because we have tried to "imitate nature," but because we have heightened the beauty of some portion of nature for ourselves.

THOMAS MERRHAN.

Bartram, near Philadelphia Jan. 10, 1852.

DETAILED CULTURE OF THE GRAPE IN VINERIES.

BY WM. CHORLTON, STATEN ISLAND, N. Y.

DEAR SIR—I respond with pleasure to your wishes respecting the description and management of the cold vinery, erected two years ago, at this place, by my employer J. C. GREEN, Esq.

The house is 74 feet long, and in other respects, the same as Mr. VAN RENSSSLAER'S at Clinton Point, described in a late number of the *Horticulturist*, with the exception of there being only two rows of pillars inside, which gives a pathway six feet through the middle of the house. There are 24 vines to each roof, and 14 on each side of the pathway, being one to each pillar, making a total of 74 vines. The base soil of the borders is a tenacious, hazelly loam, resting upon an adhesive gravelly bottom. The borders are 20 feet wide on each side of the house and twenty inside, giving a breadth of 60 feet and length

of 74 feet. A drain three feet deep, and filled with rough stones to the level of the lower base of the border, extends all round the outside, and also another on the lower end to convey the water off, the whole base being on a slight slope. Underneath the whole bed is a layer of oyster shells five inches deep, so that the entire borders rest upon drainage with a free outlet for water by the outside drains. The materials made use of in forming the borders, which are not more than two feet deep, (18 inches below and six inches above the level,) are the base soil above mentioned, 60 barrels of bone dust and 40 tons of stable manure well decomposed, being about one bushel of bone to every three, and one ton of manure to every twelve square yards.

The vines were obtained from Mr. BUIST of Philadelphia, and with the exception of three, were one year old. They were all planted inside of the house in March, 1850, the roots being carefully spread out and placed on small mounds on the surface, having about two inches deep of soil covered over them. They were pruned back to the lowest good eye, and when they commenced growing freely, water was administered plentifully over the house, and a humid atmosphere kept up, more particularly in dry and hot weather; excepting on cloudy damp days, the vines were syringed over head every evening, and the floor damped too or three times during the day. During the hot weather the borders were lightly covered with the refuse grass from the lawns. *The lower ventilators were not opened till the vines began to show appearance of ripening*, and the thermometer kept through the day from 90° to 100° while growing freely. On dull cloudy or rainy days, with an east or south-east wind, the house was kept closed, and a little sulphur strewed over the floor to prevent mildew. The laterals were shortened in to an eye as they were produced. In September appearances of maturity were visible, and water was gradually withheld; the lower ventilators were now opened gradually in the day time, increasing the air as ripening progressed.

After the middle of October, water was entirely withheld, at which time most of the vines had run up to the top of the house on one side, and as the heads were not stopped, down to the bottom on the opposite side. The leaves were allowed to remain on till they fell off, quite yellow and mature, leaving the canes well ripened and short jointed, most of them being three-fourths of an inch in diameter, with fine plump and well rounded buds and a uniform growth throughout the house.

They were now pruned in to about an average of six feet on the rafter, and each other eye on each side of the cane disbudded, leaving those intended for next season about twelve inches apart. A covering of straw was wrapped round them and they were tied down horizontally. The borders outside were covered with salt hay. The house was kept open except in severe weather or rain.

By the middle of March the buds showed signs of bursting, the vines were uncovered, and a good syringing given, which was repeated two or three times a day in mild, but withheld in cold weather. The heads of the vines were kept down in a horizontal position till all the eyes were well burst, when they were taken by degrees, according to development, and tied to the wires, the tops being allowed to hang pendant till all parts were equally broken. The flower bunches were now approaching towards bloom, and as it was not intended to allow the vines to bear heavily the first season after planting, most of the lower bunches were taken out to encourage the bottom side shoots to become as strong as the top ones, and on each other eye, higher up the cane, a bunch was allowed to remain. As the blossoms expanded, the atmosphere was allowed to become somewhat drier, and syringing was withheld overhead; the bunches were occasionally shaken to distribute the pollen and assist in fertilizing the stigmas. After blooming, and when fairly set, all

bunches not wanted were removed. The berries, when about the size of peas, were thinned out carefully, leaving the berries on smaller kinds closer, and on the larger ones more distant; the shoulders were tied up, and the clusters pegged out. Very little after-thinning was required. The borders were uncovered at the same time as the vines, and slightly forked over, and a dressing of compost laid over, (both inside and out,) about three inches thick, composed of three-fourths turf sods, one-fourth stable manure, and a light addition of sugar house refuse. These had been mixed the season before, and were well incorporated together.

When planted, the crowns of the roots were somewhat elevated, which enabled me to apply this dressing to advantage, as the small fibres were quite matted underneath the surface. The same treatment was adopted throughout the summer as last season, till the grapes began to color, when water over head was discontinued, but occasionally applied to the roots inside the house, to enable the crop to ripen off well. The borders outside were lightly mulched throughout the summer, with stable manure, and a thorough good soaking of water was applied three times during the long drouth.

On the second of August were cut, fully ripened, and well swelled, the first bunches, (Malvesia and Joslin's St. Albans,) being a little under seventeen months from the date of planting. Other kinds matured in succession; the whole crop being two hundred and sixty-two bunches, well colored, some of the Hamburgs being over two and a half pounds weight, and the other kinds being equally fine.

From the present state of the vines, I do not hesitate to say that from six to seven hundred bunches may be taken from them next season, without injury. In pruning this fall, I have cut the side branches back to a good and plump eye, with the intention of taking two shoots from one spur, each (farthest from the main stem, for fruiting,) and one close to the base, (not to be fruited till the season after,) when the spur may be cut back, thereby keeping the side shoots "at home," without stubbing in so close, and ensuring finer bunches. The top growth is cut to about six feet, and dis-budded as last season, leaving the canes over twelve feet long, and in good condition at the end of two seasons planting, to bear a full crop.

Hoping the above description may assist in stimulating the lovers of this inestimable fruit to erect houses for its cultivation, as no fruit-bearing plant is more easily grown, or gives greater return for kind treatment,

I am yours most respectfully,

WM. CHOBLTON,

Gardener to J. C. Green, Esq., New Brighton, Staten-Island.

[We thank Mr. CHOBLTON for his very practical and valuable communication. We would be glad to receive many more just such as this from our practical readers, who know but will not communicate their knowledge. ED.]

Foreign and Miscellaneous Notices.

HORTICULTURAL NOVELTIES AT EXETER.—If the reader would wish to know what is doing in this country, in the importation of new plants, he must visit Exeter. Near that ancient city lies a gentle valley, forming the nursery occupied by Messrs. Veitch & Son, in which alone will be found more new and valuable plants than in any place in Europe, with the single exception of the Royal Botanic Garden at Kew—plants obtained by private enterprise for commercial purposes, and not gathered together by the power of a mighty government. By means of excellent collectors, (two brothers of the name of Lobb,) and liberal disbursements, California, Peru, Chili, Chiloe, Patagonia, in the West; and the Khasia hills, the provinces of Tenasserim, Java, Malacca, and the ghats of Malabar, in the East, have been gleaned, and the result is gathered into hot houses or transferred to the open air, in the fertile soil and happy climate of Devonshire. Let us record a few of the species which caught our eye on a recent visit to this wealthy establishment.

First among the new plants is to be mentioned *Saxa Gothica conspicua*, a most beautiful evergreen from the Andes of Patagonia, with the aspect of a Yew tree, which H.R.H. Prince Albert, has permitted to bear one of his names. This tree has lived four years in the open air, and has all the appearance of being as hardy as an *Arucaria*. From the same country comes *Fitz-Roya patagonica*, another valuable Conifer, with drooping branches, and also the habit of a Yew; with the *Libocedrus tetragona*, an Arborvitæ-like tree, having four-cornered shoots: all exclusively in the possession of Messrs. Veitch.

Among other evergreens, the existence of which in England is unsuspected, is the great Oblique Beech tree from Patagonia, (*Fungus obliquus*;) *Eucryphia cordata*, with hard heart-shaped leaves, and flowers like a Tea plant; *Castanea chrysophylla*, the Evergreen Californian Chestnut; great bushes of *Philæa*, just beginning to produce their crimson tubular flowers, two inches long, in the midst of hard stiff deep green leaves; *Pernettya ciliaris*, with its black-green broad leaves and heaps of dull purple berries, not to mention the other species mucronata and angustifolia, loaded with pale berries, gay with ruddy tints; *Larus aromatica*, a Chilean evergreen, whose leaves are much more fragrant than Sweet Bay; *Embothrium coccineum*, with long tufts of crimson blossoms; *Eugenia apiculata* and *Myrtus Ugai*, Chilean Myrtles, the latter with a fruit like a purple Guava; and finally, the rare and curious *Desfontainia spinosa*, with the air of a Hollybush, and the flower of a scarlet trumpet Honeysuckle. Of this, one single flower has been produced upon a cutting in a pot.

Many are the new or little known evergreen

Berberries collected here; *B. Darwinii*, growing into a round, glittering, exquisitely beautiful bush; *B. flexuoso*, a handsome shrub, with straggling branches; *B. lutea*, a pretty diminutive thing; and several other species at present undetermined. *Eurybia alpina*, from New Zealand, here vindicates its claim to hardiness, along with the *Escallonia Peppigiana*, a Peruvian bush, loaded with white flowers early in the summer, and a great stiff-leaved *Dracena*, from New Zealand, which may be *D. indivisa*.

Nor are deciduous hardy plants less common here. An Indian palmated *Rubus* is loaded with yellow fruit as large as an Antwerp Raspberry; great masses of a north wall are covered with the scarlet perennial *Tropæolum speciosum*, which disregards frost but abhors the sun; the hairy-stemmed *Tropæolum Lobbianum*, is curling round a rough stake, and decorating it with its vermilion colored flowers; and *Pavia Californica*, the California Horse Chestnut, has established itself in the open quarters of the nursery. Quantities of the huge Indian *Lilium giganteum* are hastening to prepare for flowering another year, and heaps of rock-work are glittering with *Oxalis speciosa*.

Among plants of home origin, we ought to point out the *Hedera Ragneriana*, a kind of Ivy, with monstrous heart-shaped leaves; *Cotoneasters* and such plants worked half standard high on the common thorn; a noble looking Holly called *Ilex alta-clerensis*, which seems to have some of the blood of *balcarica* in it; a handsome variety of *Arbutus Andrachne*, called *photinifolia*, and most beautiful specimens of that noble *Fuchsia corallina*, whose origin has lately been disputed, but which bears unmistakable evidence of having been derived in part from *F. radicans* or some allied species.

This sketch of the hardy plants that are already saleable in this establishment, renders an account of the tender plants less interesting for the moment. To them we may return hereafter. For the present it is sufficient to name among the new plants, *Lapageria rosea*, a climber from Chiloe, with very large crimson blossoms; a fine *Hoya*, with long leathery leaves, some most elegant Indian *Sonerilas* with variegated foliage, a Peruvian *Begonia*, whose leaves are one confused stain of crimson, purple, green, and silver gray; *Cinchona Condaminea*, one of the true peruvian bark trees, a plant with a most delicious perfume, now flowering for the first time in Europe; and quantities of Indian Orchids, among which the *D. albæanguineum* stand pre-eminent. As to the Orchids, no plants can exceed their health and beauty, unless it be the choicest of M. Rucker's collection. In short, turn where you will, the eye meets nothing but what is most fine and rare, in this surprising collection of the Messrs Veitch.—*Gard. Chron.*

Domestic Notices.

THE POETRY OF WHITTIER.—The Rev. JOHN PIERPONT, in a clever and witty poem, delivered at the centennial celebration at Litchfield, Conn., thus admirably sketches the universal New-England juvenile habit of whittling, and its significance in more ways than one:—

The Yankee boy, before he's sent to school,
Well knows the mysteries of that magic tool,
The pocket knife. To that his wistful eye
Turns, while he hears his mother's lullaby;
His hoarded cents he gladly gives to get it,
He leaves no stone unturned, till he can whet it:
And, in the education of the lad,
No little part that implement hath had.
His pocket knife to the young whittier brings
A growing knowledge of material things.
Projectiles, music, and the sculptor's art,
His chestnut whistle, and his shingle darr,
His elder pop-gun with its hickory rod,
His sharp explosion and rebounding wad,
His cornstalk fiddle, and the deeper tone,
That murmurs from his pumpkin-leaf trombone,
Conspire to teach the boy. To these succeed
His bow, his arrow of a feathered reed,
His wind-mill, raised the passing breeze to win,
His water-wheel that turns upon a pin;
Or, if his father lives upon the shore,
You'll see his ship, "beam-ends" upon the floor,
Full rigged, with raking masts, and timbers staunch,
And waiting, near the wharf, for a launch.
Thus by his genius and his jack-knife driven,
E're long, he'll solve you any problem given;—
Make any gim-creek, musical or mute,
A plough, a coach, an organ or a flute,
Make you a locomotive or a clock,
Cut a canal or build a floating dock,
Or lead forth Beauty from a marble block;—
Make anything, in short, for sea or shore,
From a child's rattle to a seventy-four:—
Make it, said I? Ay, when he undertakes it
He'll make the thing, and the machine that makes it.
And, when the thing is made,—whether it'll be
To move on earth, in air, or on the sea,
Whether on water, o'er the waves to glide,
Or, upon land, to roll, revolve, or slide;
Whether to whirl, or jir, to strike or ring,
Whether it be a piston or a spring,
Wheel, pulley, tube sonorous, wood or brass,
The thing designed shall surely come to pass;—
For when his hand's upon it, you may know,
That there's go in it, and he'll make it go.

CRANBERRIES ON DRY LAND.—A great deal has been written and said, the last two years, about the possibility and profit of cranberry plantations, made on dry upland. Knowing the habits of the wild cranberry to be fixed and not variable, we have never had the least faith in the practicability of cultivating this sub-aquatic plant in this way. We notice that several of the so-called "successful" experiments, have at length turned out failures, and it will be found that people who wish to grow cranberries for profit, must have the command of low grounds—or an abundant supply of water. If ever the

cranberry is made to thrive on dry lands, it will be by raising it from seed, and so gradually adapting the constitution to the absence of moisture—and not by taking the wild plant from the swamp where it grows naturally.

HUSSEY'S REAPING MACHINES.—It would appear from the English papers, that Hussey's Reaping Machine, (which we believe has always had the preference of experienced judges in this country,) has taken the first rank in England, after repeated trials in the open field. At the Great Exhibition trial it failed, from not being in working order, and from having been managed by a common porter. The Cleveland [English] Agricultural Society, however, appointed a special jury to test McCormick's and Hussey's machines. Over a thousand persons were present, and Hussey's machine was pronounced by the judges, superior to McCormick's: "doing more work, causing less waste, cutting the grain in a better manner, and being less in cost." Foul weather in harvest time, is far more common in England than America, and Hussey's machine has proved its superiority on trial, particularly as regards its capacity for cutting grain in a wet and fallen harvest. We understand the foreign demand for this Reaping Machine is large, and that Mr. Hussey is taking out patents in France, Russia and Prussia. It is pleasant to find that Brother JONATHAN can take the lead in the harvest field of the old world sometimes, though Prof. JOHNSTON, the profound, has said we were all beggarly farmers.

HYDRAULIC RAM—VINERIES, &c.—Mr. DOWNING—Dear Sir: I wish to trouble you with a few inquiries about the water ram, and glass structures, such as cold graperies. The principle of the water ram has been made plain, through the Horticulturist and other papers, but the cost of the apparatus, and the effective force of the instrument, with the conditions necessary to its use, are data which I have been waiting some three years to know. We have never been able to learn what relative quantity of water is required to be discharged, to elevate a certain quantity a given height; nor have I

been able to ascertain how great a fall is essentially necessary to the effective operation of a ram, elevating water say 25 or 30 feet. I have been induced to trouble you with these questions, thinking you might be familiar with the practical operation and economy of this instrument, or could refer my interrogatories to some manufacturers of your acquaintance, who, I suppose, are prepared to give all necessary information in regard to it.

I am beginning to feel the want of a vinery, which, without heating apparatus, I conceive to be a simple and plain structure, but am unable to devise means to prevent injury from hail storms. I don't know whether you are subject to the fall of hail of sufficient size to endanger these structures, or whether you use shutters. It strikes me that shutters, unless entirely removed, would intercept too much light; but I am quite afraid to risk them, where hail from half an inch to one and a half inches in diameter, sometimes falls. Another question arises, which I wish to ask you. My farm is one mile in extent in its longest measurement, and presents an undulating surface, with several good building sites, which I design to improve for my tenantry. I would like to improve the different sites with houses of different style, to give variety, (am I right?) and wish to know if I should place edifices in the pointed style on the highest eminences, or the lowest. You will probably consider this a very foolish question for any one to ask, but I assure you that I am content to ask simple questions in regard to what constitutes good taste in architecture and the landscape, and trust you will pardon the same, when you consider that I have a new farm, directly from the hand of nature, and am located where I have not the benefit of erudite example.

I have now in cultivation and in English grass, near 300 acres of my 420, and when some twenty-five more have been subdued, I shall direct my energies to the ornamental improvement of my timbered lands.

I obtained some good Devon cattle from Michigan this fall, as a beginning of my original design, formed seven or eight years ago, to stock my lawns with choice breeds of animals; and shall be able to have them sufficiently increased, with what additions I hope to be able to make by the time I get my grounds ready,

to make a respectable show in the way of stock. We have had a delightful autumn and early winter—no cold weather until the 12th of December. Since which time, the thermometer has ranged below zero, the greatest portion of the time, sometimes as low as 20°; so I suppose we may say good bye again to the peaches. Yours, respectfully, J. W. Muscatine, Iowa.

REMARKS.—As almost every case where the hydraulic ram is used, differs slightly from another, we can only generalize in our answer to our correspondent's first query. The fall needed in most cases, is from three to four feet; the quantity of water forced up by the ram, (say at 200 or 300 feet distant, with 30 or 40 feet of elevation,) is about one-tenth; that is nine gallons of a given supply from a spring or stream, are used in obtaining the power necessary to force up one gallon. The cost of the ram itself, (usual sizes,) varies from 12 to 18 or 20 dollars. Besides this, enough lead pipe is needed to convey the water from the ram to the place where it is wanted. This is usually half-inch pipe, worth, at the manufactories, five or six cents a running foot; also about 20 feet of one and a half-inch pipe, to drive the ram, worth 25 or 30 cents a foot.

Severe hail storms occur occasionally here—though not so frequently as at the west. It is rarely the case, however, that greenhouse glass is greatly damaged by it. A shower of very large hail stones—averaging three-fourths of an inch in diameter, took place last autumn, while we were at a gentleman's seat upon which was a range of glass nearly two hundred feet long. The owner expected to find the glass roofs entirely destroyed after the storm. But only 60 panes were broken among so many hundreds. The steeper the roof, the less the breakage. What is termed "double thick" glass,—made especially for greenhouses, is much stronger, and is rarely broken.

In building several tenant houses upon a single piece of property, we would much prefer to construct them all in one general style—or with only slight variations, growing out of different sizes, positions, and wants. The passion for variety is the bane of modern art. It is at variance with simplicity, certainly one of the noblest and highest beauties of art, and it destroys breadth of repose and expression. When

a man always pursues a certain consistency in all that he does, he stamps the rank of character on his actions; when he changes his plans and motives every day, we say he has no character. So, in building a city, a village, or even the cottages on a farm, let every man's house be different, (as they are in the city of New-York,) and the effect is only that of a confused jumble. But let certain portions of a city, or the whole of a village or country place, show distinctly some one single pervading influence or feeling in design, and a character of dignity and importance, is at once conferred. Variety is a good thing, but it is only a secondary source of pleasure—based on the weakness, rather than the strength of man's nature. *Ed.*

A FEW REMARKS ON CHERRIES.—*Triumph of Cumberland.*—I have a cherry which passes under the name of the *Triumph of Cumberland*, which, as far back as I can trace it, originated at the Cumberland county almshouse, (a seedling.) The last two years it has been the finest cherry among about forty varieties of all the choicest cherries now in use—of the very largest size. It would, this last, and the summer before, cast into the shade such as the *Black Tartarian*, *Holland Bigarreau*, *Bigarreau de Mezel*, *Napoleon*, and all others that I had, in point of size, and second to none in point of flavor. Its form is much like that of the *Black Eagle*; it is a deep red when ripe, and it ripens about medium season.

I am satisfied that the variety is not much known out of this state, and as a nurseryman, would not attempt to give it such a recommendation, were it not that I have not a dozen trees of it for sale at present. *JACOB COCKLIN*, of York county, and *D. MILLER*, of Carlisle, have had trees of it on sale, I know, as I have got from them before now, when short of them.*

New Large Black Bigarreau.—In your work on *Fruits and Fruit Trees of America*, in describing the *Large New Black Bigarreau*, you attach a note, mentioning that it is the same as the *Black Tartarian*, in a former edition. Now I received grafts from *A. SAUL*, three years ago; among other varieties the *New Large Black Bigarreau*, which is by no means a *Black Tartarian*.

* The *Triumph of Cumberland*, and the *Cumberland Seedling Cherry*, have been confounded. I have them both on the same tree, and cannot consider them the same.

an; it is quite as large as the *Black Tartarian*, but much firmer fleshed, and about eight or ten days later—I consider it a first rate cherry. I mention this so that if *Messrs. Saul & Co.* have trees of the kinds sent out as the *New Large Black Bigarreau*, in the spring of 1848, they need not call them *Black Tartarian*, as they are not it by any means.

Bigarreau Monstreuse De Mezel.—On seeing a cut and description of the above cherry, in the *Horticulturist*, a few years ago, I think I was among the first to get hold of it. This year it fruited finely with me, and as there has been nothing said about it since its introduction into the country, and even some reputable catalogues omit a description of it, (which I think a very good plan, so long as a fruit is not known,) I will say a word about it. I have not at hand the volume of the *Horticulturist*, wherein it is described, but at the time of its ripening I considered the description above named, as correct as I would undertake to make one, except the fruit is not quite so large as the cut represented; it is quite firm, excellent flavored, and ripened a little after the *Black Tartarian*. I consider it a splendid cherry, and, from experience, believe it to be an early bearer, as a small tree but two years from the bud had three cherries on it about four feet from the ground; they were however far inferior to those on grafts on a large tree. *S. MILLER. Union Cottage, New Leb., Pa., Dec. 26, 1851.*

THE IMPROVEMENT OF GARDENERS.—Sir: Being anxious to promote the profession of gardening, I will suggest the idea of gardeners and nurserymen, in the vicinity of large towns and cities, meeting to form libraries, to consist chiefly of books on Agriculture, Horticulture, Architecture, Mathematics, Botany and Natural History, and the leading periodicals embracing the above sciences, as issued from the press. It is for the benefit of both employer and employed, to combine the strictest economy with the most profitable results—and to act on that principle, a man must understand the laws of nature, and how those laws are assisted by the ingenuity of man. Whether it is in the proper tillage of the soil; or in the various crops raised from it; or in the construction and heating of buildings for growing fruits or flowers in an artificial atmosphere. The energies of the most

talented men have been employed to become acquainted with these laws, and they have left the various methods of their practice and their results, for the benefit of those after them. To purchase the various volumes necessary for the acquirement of this knowledge, would incur a greater expense than could be spared by one individual. This being the case, and feeling the want of such assistance, I would like to see a spirit roused among gardeners and nurserymen, that would, at a trifling expense to each individual, effect the desired object.

In making an appeal to the public, to meet with the response wished for, it is necessary for them to be convinced of the utility of the object of the appeal. The persons appealed to in this instance are those connected with, or interested in gardening; and I am satisfied that those who are lovers of the art, will, themselves, assist and use their influence in their own immediate neighborhood, to cause others to lend a helping hand also. It would seem needless to enumerate the benefit that gentlemen and nurserymen would derive by employing active, intelligent men. To have such men, there must be facilities such as those suggested here, that would give them the information necessary to raise them to this standard. Now who are the employers that would not like to have such men, and how few of them there are?

The instances of stupidity and ignorance are too well known by every employer, and the little leisure of the present season could not be better employed than to form a plan and commence reading societies, before the gardening season commences. Should you find a place in your Journal for these few remarks, it may cause abler pens than mine to be employed in soliciting means for the fulfillment of the purpose, and the desired benefit be derived. THOMAS PAXTON. *Staten-Island, N. Y., Jan. 18, 1852.*

THE YELLOWS.—Dear Sir: I have seen in the Horticulturist, many *speculations* and *suggestions* as to the cause of the Yellows of the peach tree, but none of them have been satisfactory to my mind, and I wish to suggest a new theory, or at least, one that I have not seen mentioned.

This disease may be *constitutional* and *infectious*; but having observed the commencement and progress of the disease, now prevail-

ing in all the peach orchards, I believe, without exception, through the whole length and breadth of the Connecticut river valley, south of Springfield, I am fully convinced that, in this instance, it is an *epidemic*.

I first observed the disease in 1846, upon a few trees, by the premature ripening of the fruit, and the small wiry branches growing upon the main stems. This appeared simultaneously in different parts of the State, upon seedlings growing on poor soil, as well as upon the choicest varieties receiving the highest culture. Since that time the disease has prevailed to such an extent, that a large number of trees have already died, and a healthy tree can scarcely be found in this section of the state. I trust you will call out some of your Yankee correspondents, who will give us some light on this subject. Very resp't yours, C. C. SAFFORD. *Cleveland, O., Jan. 10, 1852.*

NEW FUCHSIAS.—F. SERRATIFOLIA.—The Fuchsia is fairly in the field as one of the fashionable and favorite flowers of the day. Hybridization and botanical discoveries are increasing its attractions with amazing rapidity. There is probably not another of the popular genera that has been so much improved within a space of say ten years. Its real progress may be dated from the introduction of the *fulgens* in 1837 or '38. The species and varieties that were in collections previous to it, were comparatively uninteresting. The distinct character, large foliage, and long elegant showy flowers, of that species, created a sort of *feror* among cultivators, and was the means of directing such attention to fuchsia culture and improvement, as has brought about, in so short a period of time, its present state of perfection. Hundreds of species and varieties are now in existence, and indeed hundreds of new ones are annually produced. They now occupy a place among the most brilliant objects of floral fetes, and they have become *specialities* among foreign growers, like the Rose and the Dahlia.

Amongst those of more recent introduction, *Serratifolia* is worthy of special attention, as possessing not only beauty but distinctness in its appearance and character. It is a species or sub-species introduced from Peru, by Messrs. VICTOR of Exeter, England, through their successful collector, Mr. LOBB.

Its habit is stiff and bushy, leaves of a peculiar dark green with red petioles. They are verticillate, in fours, and the flowers are produced from their axils, one from each leaf. The flowers are one and a half to two inches long, the calyx or tube of a fine bright rose, the points of the sepals or division being green; the corolla is scarlet, with a shade of orange. Altogether, when in bloom, it is a beautiful plant. We propagated it last spring for the first, and had a nice stock of young plants, but were disappointed in its not blooming with the hybrid varieties during the summer. The plants were allowed to remain on the stage in the greenhouse all summer, without any shifting or care beyond a supply of water. In the autumn, when the plants were housed, the *Serratifolia* was placed among the others in a cold corner, and much to our surprise, they soon began to show blossoms. They were then brought forward, and continued to bloom finely through the whole of November and December, although not over 10 or 12 inches high, late spring cuttings.

Thus you see its season of beauty just opens when most of the others are to be laid on the shelf to rest; and this trait, I consider, entitles it to particular attention, for a beautiful plant like this, blooming in the dreary winter months, is a real acquisition. This late blooming suggests the necessity of a different mode of treatment from the summer flowering sorts. We would in future either turn out the young plants into the border about the first of June, and report them in September, or we would plunge the pots during summer in an open border, and manage them something like *Chrysanthemums*. In either of these ways we will get good strong plants and bushy, (if kept topped) that will give a superb bloom in November and December. An English gardener in a late number of the Chronicle, states that he has been very successful with a treatment similar to this. His cuttings were struck early in February, and after being potted off, they were repeatedly shifted into a mixture of equal parts of loam, peat and leaf-mould with a little silver sand, until about the middle of May, keeping them well topped. By this time they were nice plants.

As soon as the weather permitted, I then turned them into the open borders where the soil was not over rich, choosing as dry a place

as possible, and no farther notice was taken of them, till the end of September, when they began to show flower buds.

He then prepared the same soil for them as before, and carefully lifted them into suitable pots, according to their size, keeping them in a close pit for a few days, and syringing them every evening, till they had recovered from the check, giving air by degrees until they could be fully exposed. He then placed them in a shaded situation until they were housed with the other green-house plants. Two year old plants he cuts back when done flowering, reduces the ball when they commence growing, and shifts them like young plants. Under this treatment they bloom from November till February. The same treatment exactly will answer here, but the plants will probably bloom sooner and last not quite so long.

Among the hybrid varieties I have noted, *Pearl of England*, *Fair Rosamond*, *Manifest*, *Eliza Mielliez*, President (Yonell) and *President Porcher*, (Mielliez) are first rate, and *Serratifolia multiflora*, *Serratifolia alba* and *Spectabilis* will take the same rank. P. B. Rochester, N. Y., Jan. 16, 1861.

MASS. CENTRAL BOARD OF AGRICULTURE.—This Association met at the green-room in the state house, at 10½ yesterday morning. The Board was called to order by Hon. MARSHALL P. WILDER, the President, and SIMON BROWN, editor of the *New-England Farmer*, was appointed Secretary pro tem. The attendance was quite large, and much interest was manifested by the delegates in the objects of the board.

Reports were submitted as follows: From Mr. WILDER, delegate to the Hampshire Society; Hon. ALLEN W. DODGE, delegate to the Hampshire, Hampden and Franklin; Hon. JOHN W. PROCTOR, delegate to Worcester Society, and also to the Bristol Society; Mr. WHITAKER, delegate to the Plymouth Society; Hon. B. V. FRENCH, delegate to the Berkshire Soc.; Hon. Dr. GARDNER, delegate to the Franklin Society; Col. PAGE, delegate to the Essex Soc., and Ex-Gov. EVERETT, who attended the Middlesex Exhibition. Other reports will be submitted at a future time.

Lieut. Gov. CUSHMAN, from a committee appointed for the purpose, reported a constitution and series of by-laws for the government of the Board. The constitution styles the Board the "Massachusetts Board of Agriculture." It continues the organization of the Board as before, with the addition of an Executive Committee of five. The report was accepted and the constitution adopted.

Rev. Mr. SEWELL, from the Committee on

Manufactures, submitted the report of that committee. Mr. WILDER, from the Committee on Agricultural Education, submitted a series of resolutions, taking high grounds upon that subject. Mr. DOVER, on Milch Cows and Dairy Products. Mr. GORHAM, on Stock.

AFTERNOON SESSION.

Professor FOWLER, of Amherst, submitted the following resolution:

Resolved, That the President of the Massachusetts Board of Agriculture be requested to enter into a correspondence with the Presidents of the several state societies, and of other agricultural associations, on the subject of the expediency of calling a national convention for the purpose of taking into consideration the interests of agriculture in the United States.

It was discussed and unanimously adopted.

Mr. WILDER then nominated for the Executive Committee of the Board, the following named gentleman: Hon. EDWARD EVERETT, JOHN W. PROCTOR, J. H. W. PAGE, B. V. FRENCH, Professor FOWLER. They were unanimously elected.

The second reading of Mr. Wilder's report on Agricultural Education was called for, and given. The following resolution was then offered by Lieut. Gov. CUSHMAN:

Resolved, That the report of the Committee on Agricultural Education be referred to the Executive Committee of this Board, with instructions to present the same to the Legislature in behalf of this Board, and urge the passage of such laws as may be necessary to carry out the principles and views contained in said report.

[The report asks for the establishment of a State Department of Agriculture, with officers commensurate with the importance of the duty to be performed; suggests the propriety and expediency of reserving a portion of the proceeds of the sales of public lands, and devoting such sum to the promotion of Ag. Science; and in short claims for Agriculture the same fostering care which is bestowed upon other interests.]

After a lengthy discussion upon the general subject of Agricultural Education, and the best mode of securing it, the resolution was adopted unanimously.

PENNSYLVANIA HORT. SOC.—The stated meeting of this Society was held on Tuesday evening Jan. 20, 1853. E. V. Keyser, V. P., in the chair. A few objects of interest were presented, notwithstanding the severity of the weather, which were—a beautiful basket of cut flowers, of choice kinds; among them were a raceme of the *Stenograph maculata*, and specimens of the *Cypripedium venustum*, and a moss-covered urn, bearing fine flowers. Also another beautiful flower of the Victoria Regia, the thirty-eighth produced by Mr. Cope's plant; the bud was cut and brought in, carefully protected from the cold, and when taken out it expanded handsomely, and was a perfect specimen, of smaller dimensions than those shown at recent meetings. Dishes of Pears were shown—the "Niles" variety, from Wm. V. Pettit, the Enster Beurre from E. W. S. Cleveland—a winter variety, from N. Lott, Reading, Pa., and of Apples, the "Northern Spy," from J. J. Thomas, Macedon, N. Y.; the "Keim" from C. Keeler, Reading. There was a large table of culinary vegetables from Miss Graiz's garden.

The library committee presented their annual report, by which it appears that the library contains upwards of nine hundred and fifty volumes, on subjects solely appropriate.

The special committee on nominations, submitted a ticket to be voted for at the annual meeting, and a report discussing fully on the subject of the President's determination to decline a re-election, expressing regret thereat, and fully setting forth his services, and the advantages he, by his liberality, has rendered to the cause of Horticulture in this community; likewise alluding to the course of proceeding of the Society in the encouragement of the cause, by a liberal expenditure in its awards, and anticipating a hope that so useful a society may yet be the recipient of donations and legacies to enable it to establish what was originally contemplated, a Botanic Garden; ending with a recommendation that a committee be appointed to devise some suitable testimonial to Mr. Cope, in appreciation of the good he has effected.

The Annual Meeting was organized by calling Mr. J. J. Vanderkemp, to the Chair, and appointing J. E. Mitchell Secretary. The election for officers resulted as follows:

President—Gen. Robert Patterson.

Vice-Presidents—Jas. Dumas, E. W. Keyser, Joshua Longstreth, Dr. W. D. Brinckle.

Treasurer—John Thomas.

Corresponding Secretary—Thomas C. Percival.

Recording Secretary—Thomas P. James.

Professor of Entomology—Samuel S. Haldeman, A.M.

Professor of Botany—William Darlington, M.D.

Professor of Horticultural Chemistry—Robert Hare, M.D.

A committee of five members to devise the suitable testimonial (as recommended) to Mr. Cope, was appointed. THO. P. JAMES, Recording Secretary.

Answers to Correspondents.

B. W., (Cayuga.)—The fruit buds of the peach are usually destroyed when the thermometer sinks to 12° or 13° below zero of Fahr. You may ascertain now if the mischief is done, by slicing a bud across with a sharp knife; if the center or heart of the bud, is brown or black, instead of green, (its natural color,) there will be no fruit from that bud. It will blossom, but the fruit will not set. It does not always follow, however, that even this temperature will destroy the embryo fruit—because if the bud thaws gradually, in cloudy weather, it will escape—the sun striking in the branches after so cold a night, does the harm, and hence trees quite in the shade, often escape entirely, though equally exposed to the frost.

SELECT ROSES.—*A Young Florist*, (New-York.) We recommend one dozen hardy ever-blooming roses, as follows: *Perpetuals*—Madam Lafay, Giant des Batailles, Baron Prevost, William Jesse, La Reine, Duchess of Sutherland, Aubernon; *Bourbons*—Madame Desprez, Bouquet de Flore, Souvenir de Malmaison, Pierre de St. Cyr, Mrs. Bonanquet. A dozen best Roses for pot culture, are the following: Saffrano, Princesse Marie, Souvenir de Malmaison, Devoniensis, Comte de Paris, Mrs. Bonanquet, Eugene Beauharnois, Nipheles, Queen of Lombardy, Hermosa; and for larger pots, the

branches to be trained, Solfaterre, and Cloth of Gold. The best hardy Climbing Roses for "the most northern states," are Bouraalt Elegans, Blush Boursalt, Queen of the Prairies, Baltimore Belle, Superba, and Eva Corinne. Wiegela rosea, is, so far as tried, hardy all over the north.

SELECT FRUITS.—*Ibid.* The best half-dozen Strawberries for family use, are Large Early Scarlet, Burr's New Pine, Hovey's Seedling, Hudson, Crimson Cone. The best half-dozen Plums, do., Green Gage, Imperial Gage, Purple Favorite, Smith's Orleans, Coe's Golden Drop, Frost Gage.

MAGNOLIAS.—*F. T.*, (Maine.) The only Magnolia known to be hardy in Maine, is the Cucumber Tree, *M. acuminata*. But as *M. conspicua*, and *M. soulangiana*, have borne 20° below zero, on the Hudson, without injury to any part except the flower buds, you might make trial of these beautiful Chinese varieties with confidence. Tulips kept out of the ground all winter, will be worth very little in the spring.

TREE SEEDS.—*J. M. M.*, (Tompkins county, N. Y.) Seeds of some of the ornamental trees may be had of Thorburn & Co., New-York, and Buist, Philadelphia; but a general assortment is not kept anywhere in this country. Mahaleb cherry stones, cannot probably be had short of France.

BLACK ROSES.—*A Lady*, (New-Haven.) The old story of grafting a rose on a black currant, is a pure absurdity; first, because the graft would not take, and second, because the color would not be changed if it did. The darkest roses are only a dark reddish purple; the black hollyhock is the most decidedly black flower produced by cultivation.

LAWNS.—*W. R. S.*, (New-London.) If you wish a lawn at once, don't commit the folly of planting oats, or any other crop, with your grass seed—but plant only the grass seed itself, three times as thick as usual, and you will have a close turf by July. The soil must be made deep by trenching or sub-soil plowing, if you wish to maintain the verdure through the season. Either red-top or blue-grass, mixed with white clover, makes the best lawns; three-fourths of either of the former, to one-fourth of the latter. Sow as early in the spring as the ground is mellow and dry enough, and roll the surface perfectly smooth afterwards.

MONARCH PEAR.—*A Pomologist*, (New-Bedford.) Our opinion is, that in spite of the high reputation made for Mr. KNIGHT's pears abroad, not one of them is above second rate in the United States—some of them far below that.

OSAGE ORANGE.—*W. Brenner.* This unusually cold winter will settle the hardness of this hedge plant in all parts of the country. But you must remember that because a young hedge two years old, is cut down to the ground, it does not follow that a full grown hedge would not defy the frost—the wood of the first being sappy from luxuriant growth—that of the latter being firm and mature, from constant pruning and stopping the hedge.

GRAFTING.—*P. Wilson.* In grafting over full grown orchard trees, it is the better mode to graft the top branches the first year, and the side branches the second year. This equalizes the distribution of the sap, and produces a much better head. Rhode Island Greenings and Baldwins, are more regular and heavy bearers than the others in your list.

GREEN-HOUSE.—*M.*, (Albany.) We suspect the want of healthy growth in your greenhouse, is from the high temperature at which you keep it during the night. This forces the plants to grow most in the dark—with very little pure fresh air to grow in. Keep the temperature always much lower at night than in the day time, and continue, if possible, to introduce fresh air warmed—by passing it over the flues or furnace in some sort of air chamber.

KEEPING FLOWERS FRESH.—*A Young Reader*, (Charleston.) Flowers fade so soon because the juices of the leaves evaporate through the pores—and the dryer and warmer the room, the more rapidly the flowers fade. If you wish to keep them fresh for a long time, keep them under a glass shade; or shut up a favorite bouquet at night, in a covered box, sprinkling the flowers plentifully before hand. In the morning you will find them quite fresh—they having taken up moisture through the pores of both leaf and flower.

CHERRY STOCKS.—*J. T.*, (Moundville, Wis.) The choke cherry, (*C. serotina*), has been used as a stock, but it is somewhat difficult to make the cultivated varieties take upon it. The quality of the fruit is also somewhat deteriorated by the stock.

THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE.

The Beautiful in Ground.

WE have sketched, in a former volume, the elements of the Beautiful in a Tree. Let us glance for a few moments at the Beautiful in GROUND.

We may have readers who think themselves not devoid of some taste for nature, but who have never thought of looking for beauty in the mere surface of the earth—whether in a natural landscape, or in ornamental grounds. Their idea of beauty is, for the most part, attached to the foliage and verdure, the streams of water, the high hills and the deep valleys, that make up the landscape. A meadow is to them but a meadow, and a ploughed field is but the same thing in a rough state. And yet, there is a great and enduring interest, to a refined and artistic eye, in the mere surface of the ground. There is a sense of pleasure awakened by the pleasing lines into which yonder sloping bank of turf steals away from the eye, and a sense of ugliness and harshness, by the raw and broken outline of the abandoned quarry on the hill-side, which hardly any one can be so obtuse as not to see and feel. Yet, the finer gradations are nearly overlooked, and the charm of beautiful surface in a lawn is seldom or ever considered, in selecting a new site, or improving an old one.

We believe artists and men of taste have agreed that all forms of acknowledged beauty are composed of *curved lines*; and we may add to this, that the more gentle and gradual the curves, or rather the farther they are removed from those hard and forcible lines which denote violence, the more beautiful are they. The principle applies as well to the surface of the earth, as to other objects. The most beautiful shape in ground is that where one undulation melts gradually and insensibly into another. Every one who has observed scenery where the foregrounds were remarkable for beauty, must have been struck by this prevalence of curved lines; and every landscape gardener well knows, that no grassy surface is so captivating to the eye, as one where these gentle swells and undulations rise and melt away gradually into one another. Some poet, happy in his fancy, has called such bits of grassy slopes and swells,

"earth's smiles;" and when the effect of the beauty and form of outline is heightened by the pleasing gradation of light and shade, caused by the sun's light variously reflected by such undulations of lawn, the simile seems strikingly appropriate. With every change of position the outlines vary, and the lights and shades vary with them, so that the eye is doubly pleased by the beauty of form and *chiaro-scuro*, in a lawn with gracefully undulating surface.

A flat or *level* surface is considered beautiful by many persons, though it has no beauty in itself. It is, in fact, chiefly valued because it evinces art. Though there is no positive beauty in a straight or level line, it is often interesting as expressive of *power*, and we feel as much awed by the boundless prairie, or desert, as by the lofty snow-capped hill. On a smaller scale, a level surface is sometimes agreeable in the midst of a rude and wild country by way of contrast, as a small, level garden in the Alps will sometimes attract one astonishingly, that would be passed by, unnoticed, in the midst of a flat and cultivated country.

Hence, as there are a thousand men who value power, where there is one who can feel beauty, we see all ignorant persons, who set about embellishing their pleasure-grounds, or even the site for a home, immediately commence *levelling* the surface. Once brought to this level, improvement can go no further, according to their views, since to subjugate or level, is the whole aim of man's ambition. Once levelled, you may give to grounds, or even to a whole landscape, according to their theory, as much beauty as you like. It is only a question of expense.

This is a fearful fallacy, however; fearful oftentimes to both the eye and the purse. If a dead level were the thing needful to constitute beauty of surface—then all Holland would be the Arcadia of Landscape Painters, and while CLAUDE, condemned to tame Italy, would have painted the interior of inns, and groups of boors drinking, (vide the Dutch School of Art,) TENIERS, living in the dead level of his beautiful nature, would have bequeathed to the world pictures of his native land, full of the loveliness of meadows smooth as a carpet, or enlivened only by pollard willows and stagnant canals. It is not the less fearful to see, as we have often seen in this country, where new places are continually made, a finely varied outline of ground utterly spoiled by being graded for the mansion and its surrounding lawn, at an expense which would have curved all the walks, and filled the grounds with the finest trees and shrubs, if their surface had been left nearly or quite as nature formed it. Not much better, or even far worse, is the foolish fancy many persons have of *terracing* every piece of sloping ground—as a mere matter of ornament, where no terrace is needed. It may be pretty safely said, that a terrace is always ugly, unless it is on a large scale, and is treated with dignity, so as to become part of the building itself, or more properly be supposed to belong to it than to the grounds—like the fine, architectural terraces which surround the old English mansions. But little gardens thrown up into terraces, are devoid of all beauty whatever—though they may often be rendered more useful or available in this way.

The surface of ground is rarely *ugly* in a state of nature—because all nature leans to the beautiful, and the constant action of the elements goes continually to soften and

wear away the harshness and violence of surface. What cannot be softened, is hidden and rounded by means of foliage, trees and shrubs, and creeping vines, and so the tendency to the curve is always greater and greater. But man often forms ugly surfaces of ground, by breaking up all natural curves, without recognizing their expression, by distributing lumps of earth here and there, by grading levels in the midst of undulations, and raising mounds on perfectly smooth surfaces; in short, by regarding only the little he wishes to do in his folly, and not studying the larger part that nature has already done in her wisdom. As a common, though accidental illustration of this, we may notice that the mere routine of tillage on a farm, has a tendency to destroy natural beauty of surface, by ridging up the soil at the outsides of the field, and thus breaking up that continuous flow of line which delights the eye.

Our object in these remarks, is simply to ask our readers to think in the beginning, before they even commence any improvements on the surface of ground which they wish to embellish—to think in what natural beauty really consists, and whether in grading, they are not wasting money, and losing that which they are seeking. It will be better still, if they will consider the matter seriously, when they are about buying a place, since we have said in our last number, no money is expended with so little to show for it, and so little satisfaction, as that spent in changing the original surface of the ground.

Practically—the rules we would deduce are the following: To select always, if possible, a surface varied by gentle curves and undulations. If something of this character already exists, it may often be greatly heightened or improved at little cost. Very often, too, a nearly level surface may, by a very trifling addition—only adding a few inches in certain points, be raised to a character of positive beauty—by simply following the hints given by nature.

When a surface is quite level by nature, we must, usually, content ourselves with trusting to planting, and the arrangement of walks, buildings, &c., to produce beauty and variety; and we would always, in such cases, rather expend money in introducing beautiful vases, statues, or other works of positive artistic merit, than to terrace and unmake what character nature has stamped on the ground.

Positively ugly and forbidding surfaces of ground, may be rendered highly interesting and beautiful, only by changing their character, entirely, by planting. Such ground, after this has been done, becomes only the skeleton of the fair outside of beauty and verdure that covers the forbidding original. Some of the most picturesque ravines and rocky hill-sides, if stripped entirely of their foliage, would appear as ugly as they were before beautiful, and while this may teach the improver that there is no situation that may not be rendered attractive, if the soil will yield a growth of trees, shrubs and vines, it does not the less render it worth our attention in choosing or improving a place, to examine carefully beforehand, in what really consists the Beautiful in ground, and whether we shall lose or gain it in our proposed improvements.

THE SAGE GRAPE—AGAIN.

BY J. FISK ALLEN, SALEM, MASS.

MR. EDITOR—The insinuation of your correspondent, Mr. SHELDEN, "one of the most experienced amateurs on the Hudson," that the Sage Grape was imposed upon the public by me, is false. I stated in the Culture of the Grape, upon what authority it was brought to notice; under these circumstances, if he chose to expend his two dollars, and was not satisfied with his bargain, it was his own affair.

The Horticulturist has, or should have, for its aim, the benefit of the public, not solely that of the "experienced cultivator of the Hudson."

MR. SAGE unquestionably considers this grape very good, and he has support in this opinion from others. You think "that no man who has ever tasted a grape that is a grape, would cultivate a vine of this sort, after tasting the fruit." We differ in opinion. The Sage Grape is unquestionably a native fox variety, but there are many people who prefer these to the foreign kinds. The Muscats, in all their varieties, which you and the majority of people prefer to all others, are very offensive to the minority. *Are they humbugs?* Many experienced persons, not only in this, but in European and vine districts, could not be induced to swallow one. In Paris, the Chasselas de Fontainebleau is preferred to all others. In Boston, this autumn, they were almost unsaleable at any price, Black Hamburgs and Isabellas being preferred. Are, therefore, all the varieties of Chasselas humbugs?

That any one accustomed to foreign varieties of green-house grapes, should prefer the Isabella, or any other of our native kinds, is singular and unaccountable to me, with my tastes, but it is a fact notwithstanding. I grow one Isabella vine under glass, for my family use, some members preferring them, and who do not make use of even Black Hamburgs. Many prefer the more spirited, or sour kinds, as St. Peters, Zinfandel, &c.

Supposing a reader of your Magazine living north of the state of Connecticut, wishes to cultivate the Sage Grape for his own use, or for sale, profit being his object. He buys a vine for fifty cents or one dollar, (and that is enough for him to pay for one;) plants it near a tree, or on the south side of a building; lets it grow three shoots, one to make his vine; the other two may be layered in July into boxes, to be planted out in the spring if wanted; if not, disposed of to his neighbors. The leading shoot may be bent down into a box the succeeding spring, to make another layer vine, or it can be cut back to three or four eyes. The second summer, if the soil is good, the vine will make one shoot strong enough to fruit the third year, and in four or five years the vine will be capable of bearing bushels of fruit, and this fruit will find purchasers—people who like the peculiar fox flavor. A farmer who attends our market, sold ninety dollars worth of native fox grapes this last autumn; the vines were old, and had run up large trees—all the cost to him of this fruit, was the labor of gathering.

Now, Mr. Editor, if our native grapes will yield this profit to the farmer, notwithstanding you or I may not desire them—they are not humbugs.

That they meet with a ready sale in our market, and at a price of from four to ten cts. per pound, is a fixed fact—and at a time, too, when Isabella Grapes were abundant; also pears, peaches, &c., and of green-house grapes a surfeit, selling at twenty to forty cents a pound, as to quality.

I have had the Sage Grape sent me the past season, and have given them to many indi-

viduals, who have expressed their views of its quality—differing in their opinions—some wishing a vine; one only, saying, common fox, good for nothing.

In your February number you have an error; you state me as saying "this grape was found in Maine," whereas I say in Connecticut. Yours truly, J. FISK ALLEN.

February 5, 1892.

REMARKS.—A humbug we suppose to be something that pretends to be what it is not, and thus imposes on the public. Now, if Mr. SAGE, who gave the description of this fruit in Mr. ALLEN's book, in his own words, had called the Sage Grape a large and good fox grape, every body would have understood him, and there would have been no "humbug" in the case. But he said not a word of its being a fox grape; on the contrary, he described it as having a "pulp very soft and juicy,"—while it is quite the reverse. He speaks of it as being the "richest flavored grape he ever tasted," and ends by saying, it "will surpass anything of the grape kind in this country." Now, as it answers none of these high encomiums, we think our correspondents are quite right in calling it a humbug.

Notwithstanding exceptional fancies, there is something, we must be allowed to add, like a *general judgment*, as to the quality of grapes, as in everything else. It is not sufficient to destroy that judgment, that an individual here and there does not agree. There are some men who prefer rye whiskey to the finest sherry, or pork and beans to canvass back ducks, but they would make but a sorry figure if they were to come out and attempt to palm off these delicacies as surpassing anything eatable or drinkable in the wide world.

Mr. ALLEN is right in saying that he did not impose the description of the Sage Grape upon the public. But no doubt many of his readers considered him as endorsing it, by printing Mr. SAGE's highly wrought description, without any word of caution or doubt. Ed.

CROPPING VINES UNDER GLASS.

BY H. W. S. CLEVELAND, BURLINGTON, N. J.

A. J. DOWNING, Esq.—Dear Sir: The letter of Mr. CHORLTON, in the current number of the *Horticulturist*, suggests an inquiry of much interest to grape growers, and to which a reply can only be obtained by each one contributing the result of his own experience—viz: how early, and how much fruit may vines (under glass) be permitted to bear without danger.

I have read many such statements as those of Mr. CHORLTON, of the wonderful success of vines in bearing the first or second year after planting, accompanied with sanguine anticipations of future luxuriant crops; but we rarely, if ever, hear anything more about them. I have had a few opportunities of observing the result in similar cases, and I have never known such early bearing to fail to injure the vines.

According to Mr. CHORLTON's account, his vines ripened, the second season after planting, two hundred and sixty-two bunches, which, on seventy-four vines, is an average of between three and four bunches to a vine, and next season he has no doubt of a crop of eight or nine bunches from each vine.

Now, I have no doubt of the capacity of any well managed vines, to do what his have done thus far, but I very much doubt their capacity to realize his future expectations; and what I earnestly hope, is, that Mr. C. will inform us the next year how he succeeds, and especially if he does not succeed—for experiments which fail, are as valuable to learners

as those which succeed, though much more rarely heard of. My practice is to keep an account of the crop of each vine in my house, every year, (the vines being numbered, in order to distinguish them,) and I leave more or less fruit, in proportion as the last year's crop has been well or ill ripened. My vines, which are mostly Black Hamburgs, have been planted eight years, and were not allowed to bear a bunch till the fourth year after planting, and I have never yet been able to ripen *perfectly*, more than nine or ten bunches on any single vine, which is about what Mr. CHORLTON proposes for his vines the coming season. I do not call the Black Hamburg, or any other black grapes, ripe when they are red, though they are often sold in such a state—and (which is still worse,) they often receive a premium at exhibitions.

Now, there are a great many persons who have young vines coming on, to whom this question possesses a degree of interest, far beyond the mere pecuniary value of the crops; and if all whose experience enables them to communicate facts, would send you a statement of them for publication, it would go far to establish a true standard of the quantity of fruit a vine may bear with safety, and the age at which it may begin bearing. A grape vine, properly managed, will outlive the one who plants it, and perhaps several generations after him; and a sense of gratitude for such a gift of Providence, should induce us to study its nature and habits, and beware that we do not abuse it. Very truly yours,

H. W. S. CLEVELAND.

HINTS ON FRUIT ROOMS

BY M. P. WILDER, BOSTON.

WE extract by permission, from a private letter of January last, from Hon. M. P. WILDER, the following notes regarding the construction of a fruit-room, which will interest many of our fruit growers. Ed.

My fruits are keeping admirably in the new fruit-room. This room happens to have been situated and constructed so much like Mr. MORRISON's, (of which you have seen the drawings and description in the Gardener's Chronicle,) as to be almost a fac-simile of his.

The walls of mine, however, are filled-in with charcoal and sawdust.

The Beurre Diel, Vicar of Winkfield, Excellentissima, and other autumn pears, are now in as perfect condition as when gathered from the trees, and so they will remain till the warm weather of spring approaches. I shall then try some of them in the non-conducting boxes, where I think they may be kept till summer. I have by a similar process, preserved some varieties till July. Mr. MORRISON has no new principle. All that is necessary, is to obtain a low temperature during the warm weather of autumn, and to preserve this equilibrium. This being attained, there is no difficulty whatever. When the severe weather of last month occurred, my fruits were removed from the shelves and packed in boxes, with a thin layer of clean rye straw between each tier, the tubes of the straw containing air enough to correct mildew and damp. The boxes are now piled on one side of the room, and covered with hay about three feet in depth.

My experiment was suggested by the bad effects of moisture and warmth in my old fruit cellars, under my dwelling house, and the same difficulty exists with rooms on the ground-floor of buildings. I therefore resorted to the other extreme—a cool and dry chamber on the north end of my barn, the location of which you know, (and like Mr. MORRISON's,) over the carriage room. I am now quite satisfied that we have at last ascertained the proper location for a fruit-room; namely, a cool upper apartment, with lined non-conducting walls.

With great regard, yours,

M. P. W.

VEGETABLE PHYSIOLOGY—THEORY OF PRUNING FRUIT TREES.

BY P. BARRY, ROCHESTER, N. Y.

IN tracing the history of the arts and sciences, we are not unfrequently surprised at the particular, and in some cases very remarkable events or circumstances that have given life and development to certain branches; and in fact this constitutes one of the most interesting, if not instructive, features of such a study. Printing, Navigation, Astronomy, the application of steam and electricity, all of which are exercising the most unbounded influence upon the world, have moved forward with various degrees of progress, from indistinct and almost unintelligible glimmerings, to their present amazing development.

For long ages they may have been neglected, overlooked, scarcely spoken of; when all at once, some accidental occurrence, perfectly unimportant in itself—some individual taste or caprice, or perhaps some general and wide-spread necessity, called forth by the changing conditions or pursuits of a class, or a community, induces a spirit of research and inquiry, forming a new epoch from which to date a real intelligent progress. The progressive history of the study of vegetable physiology, is, to the student of nature, no less than to the practical cultivator, replete with interest and instruction; and its future history will be still more so, vastly more so, than the past. The most difficult, and the most important points, yet await a satisfactory solution. This study just begins to take root in American minds, and it might strike into a less genial soil. A necessity has called attention to it—a necessity which every day increases in magnitude, as the interest which has created it becomes wider and deeper.

Necessity is not only "the mother of invention," as the old adage goes, but it is the mother of study and research. In America we have all the ordinary inducements to a study of nature, bestowed upon us with a bountiful and unsparing hand. What other people on earth have been blessed with such a glorious domain, extending over so many degrees of latitude; embracing so many climates, from the frozen north to the tropics; such an almost endless variety of vegetation, from the lofty and powerful oak to the lowly moss?

We are, moreover, a nation of cultivators. Our great pursuit, AGRICULTURE, which is far above and beyond all others, in its paramount importance, dooms us to a life among the vegetable productions of the earth; and it is a truth now undisputed, that our success in this pursuit depends no less upon our comprehension of the laws that control and regulate the life of plants, than on our industry in carrying out the practical teachings of experience.

Yet and withal, the science of vegetable physiology has remained up to this period, all but a dead letter amongst us. The ordinary routine of practical agriculture is profitable, and to a great extent successful, without it; but at length a special necessity for its study makes its appearance. A certain branch of culture, under certain circumstances, demands it; cannot be successfully and satisfactorily prosecuted without it; that branch is *Fruit trees*. They are not practical farmers and gardeners alone, who, in this country, and in these days, are engaged and engaging in fruit and fruit tree culture—but learned and highly cultivated men, from the pulpit, the bar, the press, and all other intellectual pursuits. These men come into the fruit garden and the nursery, not like those who are "to the manor born," with skillful, practiced hands, and minds overflowing with old fashioned experience, but strangers to everything, and novices in everything; no obstinate dogmas to contend with; all to be sought for and learned. They turn at once to books. Here

they are directed, in an off-hand, practical way, to plant in this manner, and prune in that; the reasons, the *principles* upon which such practices are based, being seldom touched upon, or if so, in a manner so superficially, or so vaguely, as to be misunderstood by those who have no practical experience to fall back upon. Books, in some cases, too, are opposed to one another, and this puzzles the beginner; so he wisely concludes to go back and examine the fundamental principles upon which all cultural operations depend.

He sees an absolute necessity for this, in order to prosecute the work he has undertaken in the same intelligent and discriminating manner to which he had been accustomed in his other pursuits. Hence it is, that the subject of vegetable physiology, principally as regards its bearing upon the pruning and management of fruit trees, is attracting the attention of the most intelligent fruit culturists in all parts of the country. Those who are in any way connected with this pursuit, are well aware of this; and the horticultural journals bear ample testimony to the fact. It cannot, therefore, be considered visionary to anticipate another great good to our country, from our new progress in fruit gardening, in addition to the ordinary benefits we are wont to enumerate. A good consisting not only in a greatly extended study of nature in the abstract, but in the theory of vegetation in detail; the germination of the seed; the structure and development of the root, the stem, the branch, the bud, and the leaf; the functions of all these parts; their connection with one another, and relative importance to the life, and growth, and fruitfulness of the tree. This is to be the study; and what a fresh, delightful, and imposing aspect it will give to cultivation! How it will raise it up from the condition of a merely toilsome, dull, empirical routine of labor, to be "the inclination of kings, and the choice of philosophers!" I therefore rejoice to see this subject taken up by inquiring and intelligent minds. No matter how crude and visionary their first conceptions may appear, nor how much they may misjudge the teachings of the book, they are valuable and important as indicative of "the good time coming." Having acquired some experience, not only in the perusal and examination of theories, as laid down in books, but in putting them to the actual test of practice, I propose to offer a few suggestions that may not be altogether unserviceable to those who are but commencing their studies, investigations, and experiments.

The first point is to obtain as clear an idea as possible, in the present state of knowledge, concerning the organic structure of trees—beginning with the first pair of leaves and radicles, or young roots; to trace the mode in which the roots spread through the soil, and imbibe food, which is conveyed upwards through the stem into the leaves; how, and by what influences it is then elaborated and prepared to enter into the formation of new parts; to trace the successive accumulation or growth of parts; of layer of wood on the top of layer; of branch upon branch; the formation of buds, the expansion of leaves, &c.

Having thus studied the general subject, the student will be prepared to understand and appreciate the operations by which all these parts are controlled, and made subservient to certain specific ends. He will comprehend why the cutting back of the first seasons' growth of a young tree increases its diameter at the base, and produces branches there by simply changing the locality of the most active point of growth. Why pruning during the inactive season of growth promotes vigor, and in the growing season diminishes it. Why root pruning affects the vigor and productiveness of trees, and under what circumstances growth and bearing are respectively promoted or retarded. The effect of moisture and dryness; heat and cold; light and shade, upon all parts of the tree; and the various operations recommended to control and regulate these elements.

Then comes the study in detail of the various forms or modifications of the same organs, and their comparative forces or functions in the general life of the tree. For in-

stance, we have *roots* of various kinds on the same tree; large woody roots and delicate fibres. *Branches and shoots* of various degrees of vigor, and of various purpose in the economy of the plant. *Buds*, varying in form, purpose, position and force.

These, all, not only in nomenclature, but in their general and particular influence and relative connection, must be carefully studied.

Again, we come to the study of the different characters presented by different genera and species of trees; differences in their general nature, modes of growth and of bearing, as for instance, between the apple and the peach; the pear and the cherry, &c. This is a most important branch of the study, for it teaches us an all important sense of this discrimination in the treatment of trees. For instance, the peach tree, unlike the apple, the pear and many others, produces its fruit on yearling shoots—that is, the fruit buds are formed during their first season's existence, and blossom and bear the next. This at once suggests the necessity of having always a good supply of healthy annual shoots. In our climate, and in most others, art must come to the aid of nature, in order to ensure this succession of good growth, and hence most authors recommend, and cultivators practice, a sort of pruning which has been termed "shortening-in," which takes away some of the fruit buds and the points of the shoots, and throws the forces of the tree into the strong wood buds towards the base, and these give us strong shoots for the next season, that we could not otherwise obtain.

Unless the mode of growth and bearing of this tree is studied, this operation will not be understood, and hence a very intelligent gentleman, in a recent article on the "theory of pruning," calls this "absurd philosophy," because it excites only one of the forces of the tree.

If he will take the *whole* subject into calm and careful consideration, he will find it not so absurd. But even after the general differences that exist between genera and species, have been studied, there are still a multitude of conditions in varieties of the same species, that must be observed well in pruning. For instance, all pears do not grow alike; some varieties are low, stout, much disposed to branch, whilst others are just the opposite; some are disposed to bear young, whilst others are tardy; and some productive to a fault, others the reverse; these different forms and habits must be met with appropriate treatment; the mode of pruning that would exactly suit one, might be ruinous to another. It is the case in all species, but he who has mastered the general principles will not experience much difficulty in adapting the treatment to the case. I hope to be able in a short time, if some one more competent does not take it up, to present a classification of varieties of fruit trees, with reference to this last point.

P. B.

Rochester, January, 1852.

THE PROGRESSIVE DECLINE OF THE VITAL POWERS OF A PLANT.

BY JOHN TOWNLEY, MOUNDVILLE, WIS.

WE commend the following interesting and valuable article, to the notice of our readers. ED.

A. J. DOWNING, Esq.—Dear Sir: When considering various explanations which had been advanced to account for the disease of the potato, known as the "curl," I have been led to inquire whether varieties of plants, as they become old, do not afford other evidence, beside that stated in my previous paper, of a progressive diminution of vital power, leading to functional derangement, debility, and death.

I am doubtful whether I shall not be trespassing too much on the patience of your readers, by recurring again to this subject; but the question I conceive has a great practical bearing, and if the view I now send you, of the effects of age, should prove on further investigation, to be well founded, the most sceptical can hardly be otherwise than convinced, because of the exact and conclusive evidence it will afford of the truth of Mr. КНИГЪ's conclusions, respecting the limited duration of varieties of plants propagated by extension.

It would seem that the potato, in the earlier years of its culture in Europe, was either entirely or comparatively free from disease. The first notice I have met with of the "curl," (a disease so called from the leaves contracting or curling, instead of expanding,) is in a paper in the Transactions of the London Society of Arts; wherein it is said, that the disease was probably first noticed in Lancashire, about 1764; about that time a man observed a few plants in his crop which decayed, or seemed to ripen sooner than the rest, and he straightway concluded that somehow he had luckily obtained a new and early kind; he accordingly marked the plants with a view to cultivate them, but was much disappointed and perplexed by the result of his experiment. Baron HERBURN, in a communication to the Board of Agriculture, said the curl was unknown in Scotland before the years 1778 or 1779. Dr. ANDERSON, in an essay on the potato, in the Bath Papers, remarked, that the only thing which seemed to be positively certain with regard to curl, is, that it was not known in the northern parts of the country, till a very few years ago, and at that time it was much less prevalent in the north than in the south.

Towards the close of the 18th century, the curl prevailed in the potato crops to such an extent, as to give rise to much discussion, and many experiments, with a view to discover the cause of the malady, and by what means it could be prevented.

Many observations might be cited to prove that this first mild form of disease of the potato, could not be attributed solely to any peculiarity of soil, season, or mode of culture, but that it was peculiar to, and therefore inherent in, certain varieties for the time being. I learn from two prize essays in the Transactions of the Society of Arts, for 1790, that it was known at that time, that certain varieties only were subject to the disease; that it was hereditary, and that the only effectual mode of getting rid of the evil, was by discarding the affected varieties. One of the writers, Mr. PITT, said, "the curl in potatoes is doubtless owing to degeneracy—to the particular variety being worn out. I have known three to fail by curling in this county, (Staffordshire.) The national remedy, therefore, is, the raising and reproducing fresh varieties, a practice which has never been interrupted by any difficulty." Mr. HOLT, who wrote from the neighborhood of Liverpool, observed, "the cause of the disease, so far as I can learn, appears to be nothing more than a degeneracy of the plant. This district, for some years, suffered great injury from curled potatoes, but few crops of late years have failed of being much infected with this disorder, for whenever the curl has appeared, in ever so small a degree, that stock has been rejected by the attentive cultivator, and new seed obtained." Hence the conclusion based on these facts, as we read in Martyn's edition of Miller, "the circumstances of the old sorts being now almost entirely cut off by curl, renders it probable that the disease is incident to declining varieties of potatoes, as canker is to declining varieties of fruit."

About the time the curl was so prevalent in England, it seems to have prevailed to a considerable extent on the continent of Europe, also. A reward of 1,200 francs was offered in 1775, by the Royal Academy of Brussels, for the best treatise on the cause of the disease. The prize was awarded to a writer who concluded that it was the result of a degeneracy of the plant, owing, as he supposed, to its being an exotic. He advised that

new varieties should be obtained from Virginia, the potato being supposed at that time to be indigenous to that country. His advice was followed, and the remedy proved efficient. So the Belgian, like the English cultivators, found that the most effectual, or only certain means of restoring their crops to health, was by substituting healthy varieties for those which were subjected to the disease.

Many well-informed men have concluded that curl is caused by the over-ripening of the seed tubers, and the facts are certainly too numerous, and too well authenticated, to admit of doubt, proving that the state of ripeness, or rather the dry condition of the tuber, does exercise a considerable influence on, if it is not the immediate cause of the curl.

The authors of several of the earlier papers for instance, observed, that when the curl was rife among the crops in rich, low-lying, early soils, it had never been experienced in neighboring hilly districts, having a northern aspect, where vegetation was more backward, and where the crops had not the same chance of becoming perfectly ripe. It was also frequently observed, that curled plants proceeded from large, hard tubers, which did not decay in the ground, as usually happens. Others had noticed that small potatoes, which had been thrown aside for pigs, but which were planted for the want of a sufficient number of sets of larger potatoes, produced entirely healthy, smooth-leaved plants.

The expedients which at various times have been resorted to with a view to prevent the disease, such as by obtaining the seed-tubers from late situations, or by raising them before the haulm had naturally decayed, or by planting late in the season, so that they could not have time to ripen, all indicate that under-ripe watery tubers afford the most healthy and vigorous plants, and some security against the disease.

The influence of the dry state of the tuber in producing curl, has also been proved experimentally. Sets taken from the waxy, or least ripened end of a long kidney potato subject to curl, were found to produce healthy plants; whereas, sets from the opposite dry end of the same tubers, did not vegetate at all, or produced curled plants. Mr. KNIGHT conceived that curl originated in the preter-naturally inspissated state of the sap, and he, from a number of tubers, the produce of wholly diseased plants, carefully detached the shoots when about three or four inches long, and planted them; as they had now little to subsist upon, except water, not a single curled leaf was produced, though more than nine-tenths of the plants which the same identical tubers subsequently produced, were much diseased.

There can hardly be any question, then, that curl is in some way induced by the perfectly ripe or dry state of the seed-tubers. But then it seems equally certain that the potato was formerly free from this disease, and that varieties do not become subject to it till they have been some time in cultivation. Sir JOHN SINCLAIR, in his work on the potato, said, "if continued too long, they are liable to disease, as the curl." SHERIFF, an eminent Scotch farmer, observed, "time or old age, never fails ultimately to bring on the curled or shriveled disorder." How are these seeming inconsistencies to be reconciled? Either the potato formerly, or varieties in the earlier years of their existence, never ripened their tubers, or perfect ripening alone is not sufficient to account for this disease. There must be some other undiscovered agent at work, which has power over those plants only that are the produce of ripe tubers of aged varieties; or else, in the progress of time, a change takes place in the tubers of a given variety; the texture must become more solid, the fluids thicker and less abundant, and therefore incapable of supporting healthy vegetation.

A given species of plant requires a certain range of temperature, and a certain amount of light, to enable it to grow in a healthy and profitable condition. The Palms of the tropics will not grow to any useful purpose in the United States; nor will our apple trees

thrive in the tropics. An excess, or a deficiency, of heat and light, are alike injurious; both lead to functional derangement, ending in general debility. A gardener, on receiving an exotic plant new to him, would desire to know its native country, and what soils and situations it preferred in its wild state, in order that he might determine what mode of culture would be most likely to be suitable to it. But different species differ widely in their power of adapting themselves to different climates, and this the gardener can only learn by experience, aided by his knowledge of the geographical range of the plant in question. Does our knowledge, then, of the native country of the potato, and of the various climates in which it is cultivated, warrant the conclusion that the curl disease is caused simply by the over-ripening of the seed tubers? that is, (if I understand correctly what is implied,) is the amount of heat and light of European summers, greater than the plant naturally requires for its healthy growth? At the first glance, it seems hardly probable that a plant which is a native of the tropical regions of South America, should be over-ripened in the climate of England. Of all cultivated plants, the potato is most accommodating. It is cultivated in every latitude from the torrid to the frigid zone, and if it is liable to be so over-ripened in England, as to cause it to be diseased, then what should be the condition of the plant when grown in the West India Islands; in the burning sands of the Cape, or under the hot and brilliant summers of the United States? The quantity and quality of the secretions of a given plant, and the solidity of its tissue, depends partly on the amount of light and heat to which it is exposed, and if the concrete state of the sap, or the dry condition of the tuber of the potato, which gives rise to curl, was simply or solely the effect of over-ripening, in England, it should follow that the plant would be useless in the United States of America, and the West Indies, or at the Cape.

I am not aware that any satisfactory evidence exists, to show that the ripe state of the tuber of an aged variety induces a certain condition of the plant, which is favorable to the attack of some animal or vegetable parasite; but there are facts on record which seem to justify the conclusion that a change does take place in the tubers of a given variety, when in the course of time its vigor declines, the tissue becomes more solid and drier, and the fluid thicker and less plentiful; or in other words, the tubers of a given variety become more dry and farinaceous.

In animals, it is well known that certain changes do take place as age creeps on. The bones gradually become more solid and brittle; the muscles more rigid, and the fluids thicker and less abundant; and various important organs, on the due exercise of which health depends, become impaired, and incapable of performing efficiently their respective functions. The opponents of Mr. KNIGHT's theory have dwelt much upon this fact, when doubting the accuracy of the conclusions at which he had arrived respecting the limited duration of individual plants. An animal, say they, becomes worn out, or dies, when old, in consequence of a structural change in many of its most important organs; but in plants or trees there is nothing analogous to this. I suspect, however, that there is a closer analogy between plants and animals in this respect, than has hitherto been supposed to exist.

The life of an animal is marked by three distinct stages, progressive, conservative, and declining. In youth, the greatest amount of food is assimilated; the body increases rapidly in size, and the limbs are supple; in middle age, little more food is appropriated than is required for the repair, or solidifying of the frame; while in the decline of life, an animal gradually becomes meagre and diminishes in size—the quantity of food assimilated is not equal to the waste of the body. "It is certain that the productive powers of a variety of the potato, is in proportion to its youth." (LINDLEY.)

It is certain, that owing to a progressive decline of the vital powers, possibly to the less

efficient state of the feeding organs, the plant is unequal to the task of absorbing and assimilating the same amount of food as in its youth; herein there is obviously a great similarity between plants and animals. I believe it is equally certain, that a structural change does gradually occur in plants, as well as in animals, when an individual declines in vigor, which change cannot be attributed solely to the action of external agents.

I may again quote the observation of the Editor of the Irish Farmers' Magazine, respecting the gradual changes induced by age, in the quality and productiveness of a variety of potato. "In a few years after a variety has been raised from seed, it arrives at its greatest degree of productiveness; then it continues annually, for a number of years, to decrease in productiveness, but to become more valuable for food, being more farinaceous, or as it is termed drier; afterwards it begins to lose this quality, also, and rapidly to decline, until in a few years more, it is utterly useless." Similar observations occur in the tenth vol. of the Quarterly Journal of Agriculture. In vigorous growing, productive varieties of the potato, yielding at first coarse grained tubers, so full of fluid sap as only to be fit for cattle, this progressive change in the quality, and consequently in the composition or structure of the tuber, has been frequently observed. HOLZ, in the Transactions of the Society of Arts, mentions a variety called the "Dabb," large, coarse, and strong flavored, and therefore unsuited for the table, which became so much improved as to be no longer rejected. MARTIN DOYLE, in his Cyclopædia of Agriculture, observes, that "the Irish Lumpers are becoming every year more farinaceous and palatable." Other observations to the same effect, may be found in papers on the "blight" of the potato, published by the Highland Society of Scotland. A remarkable change in the character of a valuable variety, came under my own notice. In my youth, a large red, kidney shaped potato, known as the Scotch Red, or Flat Red, was most extensively cultivated, and almost universally esteemed, in consequence of its being very white and farinaceous when cooked. Having been from home a few years, I found on my return, a potato in use of very inferior quality—soft, watery, and of a yellow color, and was surprised to learn that this was the Scotch Red, which was formerly so excellent. On going through the grounds of a market gardener, soon after, a patch of potatoes with peculiar spindling stems, and scanty foliage, attracted my attention, and on inquiring the name of the variety, I learned that it was the Scotch Red; it had been so great a favorite, my friend remarked, that they were obliged to continue to grow a few, as some people would have them, but they could no longer rely upon it for a crop; many sets perished without vegetating, and it was now comparatively unproductive, and the potato worthless.

The quality or dry condition of the tubers of a given variety, may be influenced to a certain extent, by the nature of the soil and season; but the gradual alteration in the tubers of varieties, as above stated, is certainly of too general and progressive a character to be the exclusive result of any external influence; it is manifestly a consequence of the declining power of the inherent principle of life.

The change from a coarse, watery potato, fit only for cattle, to one so different as to be suitable for the food of man, is an event of too marked a character to pass unnoticed, even by the most careless; hence this change has been more particularly noticed in such varieties. But if coarse varieties of the potato are subject to this progressive change, is it not probable that all are governed by the same law; that the finer varieties must be similarly affected; may not those which from the first were comparatively dry and farinaceous, become in the course of time, and when growing under ordinary circumstances, still drier, their fluids thicker, and less abundant. If this be so, then it is no longer a mystery why "time or old age never fails to bring on the curled or shrivelled disorder;" why a variety

in the earlier years of its existence may be healthy, and then become liable to the curl. We may also understand why some varieties of the potato may be over-ripened in England, and yet the plant be cultivated in the tropics; why cold, wet, and cloudy seasons, adverse to the growth of the potato, may produce tubers which afford the most healthy plants; and why a comparatively young variety may be subject to the curl, while another variety may become infirm and useless without exhibiting any marked symptoms of the disease. The utility of preventing the perfect ripening of the seed-tubers of dry and farinaceous varieties, is apparent. HOLT observed that "the finer kinds sooner degenerate than the coarse kinds, which are almost, if not always, the most productive, and retain their vigor the longest." The cause of this, too, must be now obvious. The dry and farinaceous tuber, as Mr. KNIGHT observed, "indicates some degree of approximation to disease;" an observation evidently well founded.

The changes induced in the character of the potato by age, seem calculated to throw fresh light on the gradual deterioration or wearing out of trees. Trees afford, on consideration, the same evidence as potatoes, of progressive changes, leading to functional derangement and debility. We see in a variety of fruit trees, the vigor of youth, the productiveness of maturity, and the decrepitude of age. These stages in the progress of life, are distinctly marked. The action of external influences cannot account for them. We may take three stocks of equal vigor, and graft on one a scion from a healthy tree just sprung from seed; on another a scion from a tree in the middle of life, and on the third a scion from an aged, almost worn out variety. Notwithstanding the equality of the stocks, the trees which spring from them will exhibit unequal degrees of vigor. One will grow with great luxuriance, and for some years show no disposition to bear fruit; the second will grow moderately, and soon bear fruit abundantly; whilst the third will shortly manifest all the symptoms of a decrepid old tree. Now why is this? Owing to a difference in constitutional vigor, certainly; but do not these plants afford indications of a progressive alteration in the abundance and viscosity of the fluids?

The tuber of the potato is in its structure, analogous to a branch; it is, physiologically speaking, an under-ground stem. And the tubers of a given variety are just as much the extension of an individual potato plant, as the cuttings or grafts of a variety of fruit, are the extension of an individual tree. Now we have seen that the tubers of a variety of potato just obtained from seed, contain a greater amount of disposable fluid sap than they do at any other period of the existence of the same variety. The plants are then the most luxuriant, and the produce of tubers, or under-ground stems, the most abundant. So of fruit and other trees. For many years after an apple tree has sprung from seed, the young plant or plants raised from cuttings or grafts of it, show no disposition to bear fruit. Why? The vigorous growth of strong, sappy, elastic shoots, and the abundant and large foliage, afford the answer; they indicate an abundant flow of sub-aqueous sap, which is opposed to fruitfulness. After a time the luxuriant growth of branches gradually abates, and the tree as gradually becomes more fruitful. So of the variety of potato. When the luxuriance of youth has subsided, the under-ground stems gradually decrease in quantity, but increase in quality or dryness. Now what are the conditions required for the production of fruit by a tree; are they not a moderate degree of growth, and a store of highly elaborated, or concrete sap? If, then, the plants of a fruit tree gradually become more productive as the parent plant advances towards the prime of its existence, is it not evident that the sap, under ordinary circumstances, must become more highly elaborated, and stored in the tissue in a more dry and concrete state than in youth, exactly as in the case of the potato. What an evident similarity subsists between the tree and the vegetable, on the

approach of old age. The tubers of the potato continue to diminish in quantity; they now also lose their quality, till the plant becomes utterly useless. So the branches of the declining tree become gradually more meagre, and fruit is sparingly, and less frequently produced; thereby indicating that in the branches of the aged tree, as well as in the tubers of the aged potato plant, there must be a progressive diminution in the quantity of the secretions deposited. How admirably this conclusion is borne out by an observation by Mr. KNIGHT; "the wood of all the old fruit trees," said he, "has long appeared to me to possess less elasticity and hardness, and to feel more soft and spongy under the knife, than that of new varieties. This defect may, I think, be the immediate cause of the canker and moss, though it is probably, itself, the effect of old age, and therefore incurable."

If I may hazard an opinion as to the cause of these progressive changes, I would suggest whether they are not simply owing to a progressive diminution in the activity of the absorbent vessels. We see that the vigor of the growth of a tree, and of a variety of potato, is in proportion to their youth; may not, therefore, the rapidity of the circulation of the fluids, as well as their abundance, diminish as the tree or potato becomes aged. If there is more energetic absorption by the roots in youth, may not the sap be propelled with greater force, under ordinary circumstances, than in mature, or old age, and thus circulate with greater rapidity, through the leaves; therefore be less elaborated, retain more of a fluid character, and be unsuited for the formation of blossom buds, or the support of fruit, though admirably adapted for the formation of fresh branches and roots. May not, also, the gradual diminution of the growth of branches and tubers, and the corresponding increase of the density of secretions, as the tree or potato approaches the prime of life, be owing to a more moderate yet more liberal supply, and to a less rapid flow of the sap; in consequence of which it passes more deliberately through the leaves, becomes more highly elaborated, and therefore better suited to the production of blossoms and fruit, than in its youth.

The increase of the roots of a tree is commensurate with the increase of its branches; if we head-back the branches of a healthy tree in full bearing, it immediately produces strong, sappy shoots, because the absorbent power of the roots is equivalent to the wants of a greater breadth of foliage, and little or no fruit is produced till the balance between branches and roots is nearly restored. Thus a similar effect is produced, as by the smaller system of roots, but more energetic absorbent power of a tree newly raised from seed. If, on the other hand, we allow the branches of a vigorous tree to remain, and adopt means to diminish its roots, as by the practice of root-pruning, we diminish the supply of sap, diminish the growth of branches, and make the tree more fruitful.

I desire further to suggest, whether it is not probable, that not only must there be a progressive diminution in the absorbent power of a plant as it becomes aged, but whether its annual efforts must not be less sustained in age, than in youth. Early in the season tissue is most rapidly developed; as the season advances it is perfected, or solidified. According to the brightness of the light, or as the season is favorable to the exertions of the plant, all other circumstances being similar, so is the density of its secretions, or the amount of matter which it is capable of depositing in previously formed cells. Now, do not the soft spongy tubers of a nearly expended variety of the potato, and the spongy branches, and irregularly ripened fruit of an aged tree, indicate that the exertions of the plant must become so feeble as autumn approaches, that it is not able to absorb and elaborate a sufficient quantity of sap to perfect the tissue, or feed the whole of the fruit which it formed in spring.

This view of the effects of age on plants, I hope to be able to investigate experimentally; in the mean time, I am desirous that the thoughts which have occurred to me on the subject, should find a place in your Journal. Respectfully yours. JOHN TOWNLEY.

Moundsville, Marquette County, Wis., Dec. 30.

NOTES ON PEARS.

BY LEWIS F. ALLEN, BLACK-ROCK, N. Y.

THERE has probably never been a single species of fruit, which, in all its varieties, has attracted so large a share of attention in the same space of time, and absorbed so large a monied investment within that time, in the northern half of the United States, as the Pear; and I must be permitted to say, so far, with doubtful results. Within the last ten years, thousands of acres, in garden, lawn, and orchard, have been planted, and hundreds of thousands of trees have been transferred to these plantations. France, Belgium, Germany, and England, have contributed to them. Our own nurseries have been ransacked, and now and then one rooted out of pears altogether, to supply the demand; and nurserymen themselves, have gone into pear propagation with a furor little short of the multi-caulis mania of 1838, 9 and '40.

Yet the pear mania—if mania, a new-born zeal in the cultivation of one of the choicest and best fruits with which a kind Providence has blessed us, may be called—is a sensible mania; and under ordinary circumstances, would confer much luxury and enjoyment on our people. Yet there is one difficulty which it may be feared is like to dampen much of the ardor of those who have gone into its cultivation, and in many cases, to even extinguish not only their ardor and their hopes of pleasure and profit, but the very trees themselves, which have been the objects of so much expense, labor, and solicitude.

This difficulty is the *summer blight*, which is scattered all over our pear producing country; lighting here and there, as caprice, accident or soil; cultivation, locality or variety, may attract it, and scourging and destroying the trees, without regard to the most patient and watchful attempts of the cultivator to avoid its presence, or prevent its ravages. It would be a subject of painful, yet somewhat satisfactory interest, if, in answer to a general circular addressed to every fruit-grower in the country, asking the result of his labors for the last ten years, each one would give a correct account of his success, and his mode of treatment of his trees, and of their present condition and prospects. It is to be feared that the balance of profit and loss would stand altogether on the wrong side of the ledger, and chiefly from the effects of the blight. And the worst of the matter is, that the cause and origin of the disease is as yet, altogether beyond our comprehension, and its cure past all our ingenuity. The causes of the cholera and the potato disease, are not more inscrutable, nor their remedy any easier of solution. Hundreds of pages have been written upon the "pear blight," its causes, its prevention, its cure; and it stands just where it has always stood, a terror to the cultivator, and a certain scourge to his hopes. Although thus far, in my own small efforts, happily relieved from its ravages, I hope, with fear and trembling, that my young trees just budding into fruitfulness, are not to be assailed; still, I shall not be surprised to see half of my trees stricken down by the destroyer, before another fall of the leaf.

In the month of August last, a gentleman residing in the valley of the Mohawk, paid me a visit, mainly to look at my pear trees, and to examine the soil and position where they grew,

in reference to the blight. He spent several days in this vicinity and its neighborhood. He had taken a wide survey of the counties of central and western New-York, with an inspection of the principal pear orchards, in the intention, if the results of his observations were favorable, of locating himself in our best pear growing district, and commencing an orchard on a large scale. After he had returned home, I received a letter from him, saying, that in the finest fruit regions of western New-York, he had found the blight among the pears more or less fatal, and that hardly a locality of any extent appeared exempt from it; and he was altogether in doubt of the success of his enterprise, if he should engage in it.

The pear trees in the immediate vicinity of Buffalo have, until the last two years, been almost quite exempt from the blight; and in the occasional branches which it struck, gave no alarm, from the unfrequency with which it occurred, and the slight extent of its stroke. Within two miles of the center of the city, on a high, undulating, sandy-loam soil, occasionally mixed with gravel, and the lower parts of it mixed with clayey-loam, but not highly charged with lime, are several fine fruit gardens. The extensive nurseries of Col. HODGKIN and the Messrs. BRYANT, are there, who have numerous large standard pear trees, which have for years produced a great deal of fruit, of several varieties. Close by them reside, also, Mr. LEWIS EATON and Mr. CHARLES TAINTOR, who several years ago planted fine orchards of pear trees, which had just began to be productive. These gentlemen are all good pomologists, and good cultivators, and were in high hopes that their trees, having so far escaped the blight, would remain free from it. But the last summer has been almost fatal to them. Their orchard trees, on quince and pear stocks alike, were struck in almost every possible situation, and of almost every different variety of this fruit, until they now present, in their mutilated tops and branches, but a wreck of the luxuriance and beauty which but a year before they exhibited. Their hopes are dashed at once, and they have serious doubts whether they shall abandon them to their fate, or attempt to repair damages, and plant anew. It is, at best, a trying dilemma.

A gentleman who has resided for more than forty years past at Lewiston, on the Niagara river, told me, some years since, that he would never plant another pear tree. He had planted scores of them. He had given them the best cultivation, and the closest care—I know him to be a good pomologist—but the blight had, one after another, taken off nearly all his trees, and no remedy which he could apply, and he had tried every thing he had heard of, could prevent it. The whole country between Lewiston and Lake Ontario, was alike in this particular, although it is, for other northern fruit, equal to any portion of western New-York. It lies below "the mountain," which constitutes the abrupt termination on the north of the "Onondaga Salt groupe," of the geologists, over which the Niagara is precipitated in its fall, to the level of Lake Ontario, and is on the "Clinton groupe" of rocks, a decomposable red stone, mixed with alumina, shale, sand and lime, and bearing upon it a rich, heavy, wheat producing soil. From the scarp of this "mountain," or table land, on both sides of the Niagara, running south almost on a level, to within a mile of Buffalo—all within the Onondaga Salt groupe—the soil is chiefly a heavy clay-loam; and on this soil, as yet, the blight has scarcely been known, till within a year or two past. A few wilding trees, perhaps a mile above Tonawanda, which had been planted some thirty years ago, and bore abundantly, of a tolerably decent cooking and drying pear, have been struck with the blight, and pretty much destroyed. But they had neither care nor cultivation for many years past, being on a farm not cultivated, but under the skimming operation of tenants. Yet these were quite as well cared for as others which I know on both sides the river, in flourishing health and growth, bearing bountiful crops

every year. My own trees, both at my residence, and on my farm, still flourish, and have borne considerable fruit; but I tremble for their fate, equally on the stocks of the pear, and on the quince.

I would give a trifle to know if the old French Pear trees on the Detroit river, were ever struck with the blight. But they never seem to know anything in that region about their pear trees—or if they do, they don't tell of it—and we are not likely to be much enlightened from that quarter. The soil where they stand is much the same as that of the Niagara, I described to you in the *Horticulturist* a year ago.

This is a momentous question, as the politicians say; for could the pear trees now standing in plantations in this state alone, grow unmolested by the blight for twenty or thirty years to come, millions of dollars would be added to our wealth, and the hearts of their owners made glad with their abundant harvests. Why will not our pear growers relate their experience in the columns of the *Horticulturist*? The intelligence thus gathered would at least be interesting, if not consolatory, to those who feel concerned in it.

PEAR GOSSIP.

Although in the lachrymose vein, on a favorite subject, still I wish to add the mite of experience I have had in the quality of the different varieties of pears which I have cultivated. The soil on which they grew is, as I have before observed, a heavy clay-loam, highly charged with lime, and resting on lime stone, fifteen or twenty feet below.

Bloodgood.—A capital pear, of the first quality. The tree grows well; bears abundantly; the fruit of small medium size; yellow russet, in color; juicy and high flavored. My earliest pear, so far.

French Jargonelle.—Nearly as early as the last. The tree a rampant, vigorous grower. The fruit is beautiful to the eye, but worthless to the taste—not worth growing. It has borne with me several years.

Bartlett.—Perfect in all the qualities that has ever been attributed to it. It follows close upon the *Bloodgood* in ripening, and is perhaps the most profitable pear of the season, when one has a near and ready market. The *Bartlett* is a vigorous grower, and a great bearer; and may, by proper care, be kept in eating two to three weeks,—but if over kept, is worthless.

Louise Bonne de Jersey.—A first quality pear in all respects. The tree is a vigorous, upright grower, and a great bearer. The fruit is beautiful to the eye; large, juicy, rich, and melting. One can scarcely grow too many of them.

White Doyenne, or Virgalieu.—This world-renowned pear it is not necessary here to discuss. It grows all over western New-York, where the blight does not kill it, in its fullest perfection, with an occasional exception of spotting and cracking. It cannot be too widely cultivated, where its fruit grows perfect.

Marie Louise.—This pear has stood in my grounds a dozen years, and in only two years of the seven or eight of its bearing—the first year and the last—has the fruit been really good. Last season it was almost equal to the *Virgalieu*; large, melting, sweet, and delicious. It is a careless, slovenly grower; writhing and twisting its branches in all sorts of ways. Yet it is a good bearer. Were I to plant again, it should not be in my collection.

Brown Beurre.—I have before spoken of this fine old fruit. It is somewhat variable, owing to position, and cultivation; but with a warm, rich, heavy soil, and good care, it is almost always good; and when good, so very delicious to the taste, in its melting, vinous flavor, that an occasional delinquency may be excused. Yet the largest and finest *Brown Beurre*s I have ever seen, grew on trees in my neighborhood, which stand on a very heavy,

stiff, clay loam—but rich—with no cultivation at all, except what a careless plowing gives them, and what trimming they get by the cattle browsing upon them in winter. There is something queer about that. Possibly it is the best way to treat them; but I cannot make up my mind to serve my own trees so.

Stevens' Genesee.—This should have followed the Bartlett in succession of ripening. It is a capital pear in the growth of its wood, its hardiness and full bearing properties. Of only second quality in flavor, when compared with the Virgalieu or Louise Bonne de Jersey. It is all, in excellence, that has been claimed for it.

Van Mon's Leon le Clerc.—From what I have seen, and what I have heard of this pear from observing men, I fear that those who have built high hopes upon it, from the triumphant tones with which it entered the United States, will be disappointed. It bore with me last year, on a thrifty young tree, from grafts which I obtained of Mr. Charles Downing, and which, I have no doubt, are genuine. The fruit cracked and spotted before it was half matured, which caused it to grow out of shape; and the flavor, when I gathered and ripened it, amounted to nothing. I have also seen it at the exhibitions. I shall not propagate it.

Duchesse D'Angouleme.—Not satisfactory, on the pear stock; but good on the quince. It is a noble looking, great coarse fruit, of tolerable flavor, fair second quality. It will do to sell to those who only judge of pears by their size and appearance. For preserving, they are grand. They should be grown only on quince stocks, and then, near to the ground, that the wind may not dislodge them, which it will be quite apt to do, if suffered to grow high.

Seckel.—It is hardly worth while to talk about the Seckel—the highest flavored pear known. This is probably the most northern latitude in which it will grow; and in favorable seasons it is as highly flavored, and as well grown in western New-York, as in the neighborhood of Philadelphia, its native soil. I have nowhere seen it larger and better flavored than here.

Winter Nelis.—I hardly knew what to say about this pear. I have fruited it for the past three years. It is a *mean* grower—to use common language—with small, twisting, and tumbling spray; yet, after a while, the limbs shoot up into respectable shape, and may make a top, by and bye. The tree bears well; is a thrifty grower; and the fruit of medium size, juicy, vinous, and good. Better on quince stocks than on pear—so I have found it. Is not this a queer sport of nature, that some kinds of pear should be better on the quince—a low, scrubby, acrid fruit bearing thing—than on the pear stock itself?

Nonsuch—or, *I know not what to call it.*—This is a pear which I got from Judge Buel thirteen years ago, with other pears, under the name of *Beurre D'Arenberg*—which it certainly is not. It is a winter pear. It is a strong and vigorous grower, bears abundantly, and its fruit is of the first quality; sweet, melting, juicy, delicious; a little gritty at the core; and ripens from the middle of November to the middle of December—keeping, by hard work, to Christmas. Your figure of the "*Glout Morceau*," in the "*Fruits and Fruit Trees of America*," resembles it very closely, as does that of the "*Soldat Laboureur*," described by Mr. OLMSTED, in the January number of the *Horticulturist*. I supposed it to be the *Glout Morceau*, from hearing that the pears early imported into this country from France, under the name of *Beurre D'Arenberg*, were found, on trial, to be of that variety. I presented it at the American Pomological Convention, at Syracuse, in 1849, to the inspection of Messrs. Parsons, of Flushing, Charles Downing and Mr. Saul, of Newburgh, and John J. Thomas, of Macedon—all good judges, and their opinion was that

it was *not* the Glout Morceau, but *more like* the Beurre Rance. As it was not then ripe, its taste could be no guide to their judgment.

Its growth is somewhat twisting, "spreading and declining in habit, with wavy (serrated) leaves," and the color of the wood "dark olive," as you describe the Glout Morceau. Yet it is not like the pear *trees* which I have seen about here, worked on the quince, and *called* by that name. The shoots of this last are upright, and the leaf more round, and dull in color, and somewhat downy underneath. Neither the color of the wood, nor of the fruit, is as you describe the "Beurre de Rance," the fruit of which last is "rather rough, and always remaining green;" whereas *my* pear is a rich yellow, sometimes a little russety, with small green specks upon its surface. I never tasted so good a *winter* pear. I have propagated it largely; and, name or not, want no better winter pear than this.

I fancy that we, in America, have not yet arrived at the end of all wisdom in Pears. We have a good deal to learn. Another thing; I have great doubts whether our late importations from abroad, in these extensive varieties which our amateurs and nurserymen are introducing, are to do us much good. Most of these foreign pears are too "high bred." Compare many of them with the best of American origin, and see how infinitely inferior they are in hardihood and growth; and in flavor they do not excel, if they even equal our *best*. Still, where we are lacking in American pears of the requisite flavor, for their season, I would adopt the foreign ones; but *these qualities equal*, commend me to the native.

We are also running after too many kinds. What is the use of bothering one's brains after fifty or a hundred, or five hundred things, merely for variety's sake, when perhaps a dozen or twenty will comprise all that can be got in the five hundred? At a rough dash, I will name a dozen pears which will give you all the excellence you can get out of the entire pear family, in the circle of their seasons of ripening, for *this* locality—say western New-York: Bloodgood, Bartlett, Stevens' Genesee, White Doyenne, Grey Doyenne, Louise Bonne de Jersey, Brown Beurre, Seckel, Vicar of Winkfield, Beurre D'Arenberg, *my* Nonsuch, or Glout Morceau, Winter Nelis, and for baking and preserving, the Orange Bergamont.

There is another advantage in growing but a limited number of really *good* fruits, which it may be well for those who cultivate for market, to consider. The consumers of fruits in our towns and cities, know and care little about *varieties*, other than what indicates their quality. They know what a *good* fruit is, and when they learn its name they remember it; and that is what, in its season, they inquire for. But if a new variety is introduced, they have got to be taught its excellence by the *taste*; and they will still prefer the old variety which they have approved, to any thing simply *new*, be it ever so good.

Last September, I had a few Bartlett pears, beyond what were wanted in the house, and as I had never seen any in the Buffalo fruit shops, concluded to take them into town, and try them. I went to one of the first dealers, and asked him what he would pay for Bartlett pears. "Bartlett pears!" exclaimed he, "what are they?" "Why, the very best pears of the season," I replied; "look at them." "Well, they *do* look good," he continued, "but they won't *measure* any more to the bushel than smaller ones? I buy plenty of good pears from the country for six shillings to a dollar a bushel." "Now, my fine fellow, I want you to take these pears, and sell them at *three* cents a-piece, and for the largest do you get *four*, or keep them till I call for them." There had never been a Bartlett pear in market. "I'll try it," he replied, "but I never could get more than *one* cent for a pear, and I guess you'll have to take them away again." This was about 10

o'clock in the morning. The side-walk was full of people, passing along, and I retreated out of the way, to see the trial of my Bartletts, which stood near the door, the basket in which they were, partially turned up on its side to show them temptingly. "What pears are those?" asks one, who stops to look at them. "Mr. Allen calls them Bartletts, but I never saw any before. He says they are *first rate*." "Well, I'll try one. What's the price?" "Three cents a piece, and *nothing shorter*! So he told me." "Well, that's *loud*! but I'll try one any way." He tasted it. "That is a pear! I'll take half a dozen. This is the only *pear* I ever tasted in Buffalo." "What are these?" asked another. "Bartlett pears." "Ah! well, my wife has told me a dozen times how good Bartlett pears were. Lend me a basket and I'll take home a dozen. What's the price?" "Three cents a piece." "Confounded dear! but they'll please my wife and the children." I saw the customers thicken, and left, thinking the experiment would do. Next day I called again. "Have you any more Bartlett pears?" inquired the shop-keeper. "No. Are they all gone?" "Gone! yes; and I could have peddled out twenty bushels, by the half dozen, if I only had them." I was stopped a dozen times that morning, by the dealers, to know if I had any more Bartlett pears; and could have sold five hundred bushels while they were in season, at three to four dollars a bushel, if I only had them.

I am growing a few trees of "Kirtland's Seedling," by way of experiment, which I grafted in the spring of 1850, from cuttings sent me by Professor KIRTLAND, of Cleveland. It has not yet fruited; but he claims that it is as good a pear in flavor as the Seckel. If so, it will be a treasure; for it is a much more rapid grower; a beautiful yellow wood; upright, like the Seckel; and every way a handsome top. I hope to fruit it another year. If it prove what Prof. K. says of it, the "Seedling" may supercede the parent Seckel in our locality, which is a slow grower every where, and, *not always*, a certain fruit, in its flavor.

The Onondaga Pear.—Although spinning a long yarn, which I fear both yourself and your readers will get tired of—but it is a gusty, snowy, inhospitable day, and my Short Horns, and Devons, and Southdowns, are all snugly in their stables and shelters, with enough to eat; and the fruit trees all safe under the snow, provided the pestilent mice don't nibble them—I may as well make an afternoon of it, and do up my gossip at once.

Sometime last fall I received a peach basket from the express office, with my address upon it. I opened it; but found no letter within, nor did I receive any message from any other source, informing me who it was from; but on examination, finding that it was stuffed, and packed on the top, with all sorts of newspapers, concluded that the large and beautiful Onondaga Pears, of which it contained nearly half a bushel, could come from none other than my excellent pomological friend, VIVUS W. SMITH, Editor of the Western State Journal, at Syracuse. If he *did* send those pears, I here thank him most heartily for them. If Mr. SMITH did not send them, this random thank for the most welcome *waiif*, may be appropriated by him, her, or they, who did me the kindness. And if I ever can find out the donor, I will send him one of my choicest Niagara *Muscalunge*—our best river fish—in return. The pears were large, perfect, remarkably well grown, and in excellent preservation. The Onondaga is said to be a great bearer. I know it to be a strong and rapid grower, as I have it in cultivation. Its fruit is large, fair, and beautiful. Its season, October. For preserving and cooking it has excellent qualities; but as a dessert pear, it *lacks richness of flavor*, although soft, juicy, and melting. The flesh, too, is coarse—a quality common to all large fruits; and although the Onondaga does not equal the best of our standard pears in flavor, yet its other excellent qualities may warrant its

extensive cultivation as a market pear, and as one to make up a variety in a circle of substantial and valuable house-keeping fruits.

There is yet another pear, which, in naming it, I shall probably be laughed at by some of my pomological neighbors, who are sometimes wise beyond what is written. It is the *Orange Bergamot* of COXE, and described by that author in his *Work on Fruits*. This pear was early introduced here as the "Orange Pear," either by the late WILLIAM HODGE, or his brother Benjamin, the proprietor of the "Buffalo Nursery," who now occasionally makes himself merry at its expense; yet I doubt whether he ever did the state better service, than when propagating and disseminating this pear for many years, until he fancied he knew better. There are many trees of this variety scattered in the neighborhood of Buffalo. Its qualities are these: The tree is very thrifty in growth, and hardy as a white oak, with a handsome upright head, bearing large crops every year. I have never known it to be struck with the blight, although it may not escape that scourge. The fruit is of medium size, remarkably fair and uniform in appearance, and in shape somewhat like the Brown Beurre. Its color, when ripe, is that of a rich lemon. Its flesh is too dry for a choice eating pear, although its flavor is good. Its great excellence is for *baking* and *preserving*; and for these it is altogether the *best* pear I ever have seen. I have two trees, which I found on my grounds when I purchased them, perhaps now twenty-five years old. It comes into baking early in September, and will last until late in October, being in baking five or six weeks. For preserving, I have seen no pear which holds its consistency so well, absorbs sugar so perfectly, imparts a finer flavor of itself, and so delicate in its color and appearance. We have tried other pears, and of the best dessert varieties, for this purpose, by its side, and the Orange has exceeded them all in its preserving qualities. Repeated juries of ladies have settled this question. For preserving and baking, I shall propagate it just as long as I can, satisfied that no other which I can grow will equal it for these purposes. I showed this pear at the Pomological Convention in Buffalo, in 1848. I explained its good qualities, and tried all my small eloquence to get it adopted for *what it was*. But after considerable discussion, the Doctors there assembled—Col. HODGE with the rest—thrust my unfortunate pear under the table, and "rejected it without a count." I picked the bantling up from "the rabble rout" of outcasts among which it was consigned, put it carefully in my pocket, and walked out of the convention with feelings akin to those of the tearful damsel in MOORE'S *Lalla Rookh*:

"I never nursed a dear Gazelle
To cheer me with its soft dark eye,
But when it came to know me well,
And love me, it was sure to die!"

I have since grafted several of my orchard trees with the *Orange Pear*.

LEWIS F. ALLEN.

Black Rock, January, 1892.

NOTES ON GARDENS AND COUNTRY SEATS NEAR BOSTON.

BY HORTICOLA, BOSTON.

BELMONT PLACE, the residence of J. P. CUSHING, Esq., Watertown. This is one of the most noted places in this neighborhood, remarkable especially for its completeness in all departments, and upon the whole it is a place worthy of something more than a passing notice. The grounds around the mansion, display not much variety of surface, sloping a

little towards the highway; very imperfectly, and I would say rather unpicturesquely varied with ornamental trees; but little judgment having been exercised in the original distribution of the plantation. The walks about the place appeared to us to be arranged without either utility, simplicity, or effect, more especially the larger carriage drives, which seem to run in upon and parallel to each other, in a somewhat uncereemonious manner—exhibiting a very apparent deficiency of that grace and dignity which carriage roads should possess in a demense of the pretensions of Mr. Cushing's. The grounds are laid out in a half park, half pleasure-ground sort of style, and seem to have been done without any obvious leading principle, other than that suggested by the idea of filling the ground with trees, and letting them grow till they destroyed each other.*

The principal feature of this place is the fine range of hot-houses, which are erected within an enclosure surrounded by a brick wall, and finely trellised for training fruit trees on its ample surface. There is a fine range of hot-houses on the southern wall, some three hundred feet long, with inferior ranges on the eastern and western walls for peaches. The conservatory, in the center, is a noble house, though somewhat badly arranged with regard to plant growing; yet the effect is good, where the plants are nicely arranged on the stages, and covered with bloom, as was the case during our visit. There are many fine plants in this house, especially a noble plant of *Rhododendron arborea*, which we thought altogether out of place, and ought to be standing out of doors, which it would do with a little protection in winter—[not in such winters as this. Ed.] The plants have very much improved since we last visited this place, and many noble specimens are now in full blossom, manifesting great skill in their culture. The gardener pointed out to us a new seedling *Abutilon*, which we propose naming *Shimminii*, in honor of its raiser Mr. SHIMMIN, the superintendent of the gardens. This *Abutilon* is a hybrid between the *A. venustum* and *A. Bedfordiana*, and much finer than either. We never saw the *Blattia Tankerville* flowered so splendidly as here, some pots throwing up more than a dozen large flower spikes. *Torenia asiatica*, in large globular masses, the finest we ever saw. We hope Mr. Shimmin, or his foreman Mr. Everts, will favor us with his manner of culture and management for our gardener.

OAKLY PLACE, the residence of Mrs. PRATT, is near Mr. CUSHING's, and presents a fine specimen of a small country place, combining the picturesque and the natural—the gardenesque and the wild, in beautiful harmony together. From one point in the garden a splendid birds-eye view of the surrounding country is obtained, studded with villages, school houses and church spires—constituting the finest prospect we have seen in the vicinage of Boston. The mansion house is approached by a noble avenue of trees, and stands on the brow of an eminence overlooking the whole country around. A beautiful gate house has just been erected, the prettiest thing of the kind hereabouts, and has a fine effect on passing along the highway. The hot-houses here are in excellent order, and a summer plant house was erected last year for arranging the camellias in during the summer months. This novel structure is perfectly unique, having the plan and elevation of a common span roofed green-house, but covered roof and sides with *slats* (narrow strips of boards) two inches wide, diamond fashion. This is a most useful house, as it shades the plants from the hot sun, yet admits sufficient air and light to enable them to mature their growth and buds. Everything about this place exhibits a superior skill in culture and keeping, and many things worthy of the imitation of the amateur and practical gardener. Mr. McLENXAN showed us a lot of *Rhododendrons* which had been planted out on an open border for

* Our correspondent hardly does justice to Belmont Place—which is certainly open to criticism in the way in which it has been planted—but which, take it as a whole, including pleasure grounds, gardens, stables, stock and farm, is the most complete gentleman's residence in New-England. Ed.

a number of years, which looked well, and were quite covered with flower buds. This we consider quite a triumph in this Borealean climate.

The residence of Mr. BIGELOW, near Brighton, is a prettily situated spot, nestling snugly on the sunny slope of a hill-side. Here we found a pretty good range of hot-houses, consisting of two graperies, with a small green-house in the center; the latter rather small, badly contrived, but containing a nice assortment of green-house plants. We found here the finest specimens of *Ericas* that we have yet seen around Boston. The *E. transparentis* and *metulastora bicolor*, were splendid, and some fine large specimens of the soft wooded kinds. How seldom we see a good *Erica*, and how seldom any at all, except the few very common ones grown by florists to produce cut flowers. Such plants as those of Mr. BIGELOW'S, would almost tempt one to build a house for *Ericas* alone, for surely no tribe of plants in the whole vegetable kingdom better deserves one. This place was under the care of Mr. BRIMS, a good gardener; and one who apparently prides himself in neatness—for what is something rare just now, every pot was as clean as a dinner plate, and the whole place showed the utmost care and attention on the part of the gardener. This place is noted for grapes, and from the appearance of the vines, they will satisfy the expectations which we have formed of them, and maintain the high reputation they have formerly possessed.

The residence of JONATHAN FRENCH, Esq., Roxbury, is a charming little place. The grounds possess no natural advantages, and are almost entirely dependent on art for their interest and beauty. The surface at one time was full of ledges, so much so that scarcely a tree could be planted till a hole had been blasted for it with powder. Yet the grounds are now well laid out, and judiciously planted. A fine green-house has been built lately, the site of which, we were informed, was cut out of the solid rock. This house is filled with a fine collection of plants, including some splendid *Camellias*, *Ericas*, *Epacris*, *Azaleas*, *Geraniums*, *Roses*, &c., kept in excellent order by the gardener, Mr. WALSH, to whom much credit is due for the present condition of the place, and the healthiness and vigor of the plants and shrubs. On a level plateau between the green-house and the highway, Mr. Walsh has laid out a very pretty flower garden, with gravel walks edged with box, which, when filled with a great variety of summer flowering plants, forms a beautiful object in the grounds.

There are few places in this neighborhood where so much has been done in a small space as here, and fewer still, where everything is kept in such good order. We cannot omit to mention, that the finest roses which have been grown in this part of the country, have been produced at this place, by Mr. Walsh, who grows them in a pit heated by hot-water pipes, by which he can turn on or take off heat, at pleasure; this is a most admirable method, and one that we hope to see more extensively adopted for the culture of plants in winter, as well as in forcing cucumbers, and other early crops in spring, by which the expense and labor, as well as precariousness of dung-beds, are entirely obviated. We left this pretty little place much pleased with our call, and highly delighted with the science, skill, and neatness, which characterised everything about it, and will return with pleasure to see its beauties under more favorable circumstances.

During our ramble we visited a considerable number of other places, which I shall communicate at some early opportunity

HORTICOLA.

Boston, Feb. 8, 1852.

WHAT WILL THE EDIFICE COST.

BY DAVID COUSIN.*

THE question, "What will it cost?" was selected as the title of this paper in order briefly to indicate the scope of the following remarks, which are entirely of a practical nature.

What will it cost? A weighty question this, which ought to be gravely put, in regard to every object that can excite the ambition or vanity of the human mind. A wide field of inquiry is thus opened up doubtless, but I shall follow it only so far as applicable to architectural design, in regard to which all must admit its importance. Indeed, it is in accordance with the daily experience of the architect, that when a new work is proposed to be confided to his care, the first question generally put is, "What will it cost?"

Now, admitting to the fullest extent, the propriety of ascertaining with all possible accuracy, the ultimate cost of any work before commencing operations, it seems deserving of inquiry, what the effect upon art is, of thus giving to such considerations a place of the first importance.

In every architectural work—no matter of what extent—whether a cottage or a palace—the first and all-important question is, What do the circumstances of the case in hand require? Determine this question, and having done so, then follows, in its natural course, that as to cost. Even in cases where, of necessity, the question as to cost must be strictly kept in view, mere cheapness ought never, for a permanent building, to be the sole aim. There are considerations of higher interest, which, in no circumstances, ought to be overlooked—not even in the erection of the humblest cottage—not to speak of public buildings. For it must ever be kept in mind, that the works of the architect differ from those of all other artists, inasmuch as they bulk largely on the eye of the public, and cannot be hid. Unlike the productions of the poet or the painter, they cannot be laid aside when their brief hour of popularity has passed away. On the contrary, they are prominent and enduring structures, generally of such magnitude as to add new features to the aspect of the country. The architectural monuments of successive ages, therefore, serve as landmarks, indicating to future historians the progressive stages of advancing refinement. In this view, architecture becomes the exponent of the civilization and habits of a people: it is read and known of all men, and ever obtrudes its emphatic testimony on the most transient passenger. Its records have been preserved, when every other record of the people who owned it, has perished in the abyss of remote antiquity. And even where Tradition herself, had become silent, the works of the architect in the infancy of the world have, by the perseverance of a Layard, been disclosed to view. The gorgeous halls and stately palaces of ancient Nineveh proclaim, as with the thrilling voice of one raised from the dead, the vast resources of that mighty empire, and the pomp and glory of her potentates, who thus seem restored back again to the world, after ages of oblivion. Such is the high position which architecture assumes—such are the responsible duties which the architect is called on to perform. He becomes the historian of his country's civilization, and his works are written as with an iron pen on tables of stone. He can, therefore, no more perform these duties lightly, or with a sinister motive, than can the military engineer, to whom are entrusted the outworks for the defence of his country: he cannot, in order to please the taste of his employer, do what he, after mature deliberation, believes to be a violation of good taste, any more than can the physician alter his prescription to please the palate of his patient.

* From the London Builder.

If such be a true representation of the views which ought to guide the architect in the performance of his duties, it will not be difficult to determine the position in the consideration of any contemplated work which ought to be assigned to the question—What will it cost?

Thus to preface all our inquiries, and to make the question of cost paramount to every other consideration, is to lay an instant arrest on design. The architect, thus fettered, is precluded from all sympathy with the good and the true—the only source of the beautiful. The imagination must be schooled down to the views of the utilitarian, who values everything by a money standard; and thus images of nothing but what is cheap present themselves—ever meagre and starved in their forms. All aspirations after those forms of beauty which art can supply, are quenched. The imagination thus enthralled, refuses her office, and the advancement of art becomes impossible: its very existence is altogether perilled. The architect, thus trammelled, must be content to descend from the high platform of his profession, and occupy the more humble position of the handicraftsman. The effect of this system, so injurious to the mind of the designer, is alike fatal to the result of his labors. A building reared under such circumstances, forever afterwards betrays its sordid origin in the meanness of its features, and the leanness of its forms, which, in spite of all future efforts, can rarely be effaced. Nothing short of the direst urgency should induce the architect to give way to the system—nothing short of physical necessity can excuse it. Begun with the one object of economy alone before the mind, the meagre starved design, in the course of being developed, seldom comes up to the expectation of its proprietor; and during its progress, is not unfrequently made to undergo a variety of transmutations, in the vain hope of rendering its ungainly aspect somewhat more attractive. The result in most such cases is, that the cost in the end is greater than if a proper system had been at first adopted. The unhappy architect loses his credit, and the disappointed proprietor loses his money without attaining his object. It were easy to illustrate these remarks, by reference to examples around us, and these not everyday works, but such as are of considerable pretension to architectural effect, occupying a prominent position, and bulking largely on the public eye.

But without referring to recent works, the parish churches of the last century may be safely quoted as illustrating the miserable result of giving pre-eminence to the question of cost. What huge monstrosities do we see scattered all over the country. How often do we find some miserable fabric, stamped in its every feature with sordid parsimony, marring one of Nature's loveliest landscapes, in which she has scattered her richest stores in boundless profusion. And how sadly do these contrast with the parish churches of England of the fourteenth and fifteenth centuries, or with those of the same period still existing in our own country, so beautiful, even though in ruins, and adding fresh charms to the fairest scenes. These fine fragments of by-gone ages, have done more to revive the dark superstitions of their times, than the world care to admit. But why should good taste, or a true and noble architecture, be confined to the unreformed creed of the middle ages? Let heritors and proprietors abandon the miserable system of starved economy, and follow the more generous system of by-gone times, already so auspiciously revived in various quarters.

The banking establishments of our cities, and other public institutions, have shown in their recent architectural works, a fine example of wise and judicious liberality, which, it is to be hoped, will not be lost sight of by other public bodies throughout the country, so that the question, what will it cost? will no longer be allowed to lord it over every other consideration.

Are considerations of expense, then, to be entirely overlooked or set aside? By no means. No man beginneth to build a tower without first counting the cost. But surely he must previously, and first of all, endeavor to form a clear idea of what the tower ought to be, and of what the circumstances require at his hands.

The peculiarities of the site, or of the neighborhood, will all be considered by the judicious architect. He will endeavor to work out his design in accordance with these, having a truthful regard to the circumstances of the case, and an enlightened view to the ultimate good of the whole. Having thus endeavored to form a clear idea of the extent and character of the proposed work, he will, while attempting to realize it, and give it form, employ all the artistic skill at his command. In this way, the mind is left unfettered, and free to choose from amidst all the forms of beauty which fancy can disclose. And it is only by following such a course, that architecture can be entitled to take its place, and rank first among the fine arts. Painting and Sculpture will then become her handmaidens, ever in attendance to adorn and exalt her.

It is at this stage of the proceeding that the question of expense comes up in its natural order—a question deserving ample inquiry, and an honest answer; and in no department of his art are the skill and qualifications of the architect more severely put to the test. The pecuniary interests of his employer are confided to his care: he looks to him, on the one hand, for protection against the undue demands of the contractor, and on the other, against an undue increase of additional works arising from his own neglect or oversight. The architect, then, requires not only a thorough knowledge of the qualities of the various departments of work, but of their value, and of the modes of measurement, in order to be able to judge of the rates of charge. Though called on to look to the interests of his employer, he is equally required to see that justice be done to the contractor. And when the accounts come to be submitted to his award, he is to act with the uprightness and integrity of a judge, and is bound to see justice done, at whatever sacrifice of feeling or of self-interest,—a task, this, at once difficult and delicate, requiring a thorough knowledge of the value of the varied and multitudinous items connected with the building art, which can only be acquired by laborious and incessant perseverance.

The want of proper skill in these matters, or perhaps of proper attention to them, is the cause of that fatal error which so frequently occurs, of estimating the probable expense of a contemplated work, at a sum far below what it is possible to execute it for. Such a system is injurious to the best interests of true art. It engenders suspicion and distrust, and its inevitable result is to make in future, the question of cost a paramount object. And while in the first instance it may only affect the pockets of the employer, it is sure in the end to tell against the architect. Complaints against this system are not new. It is curious and instructive to find they are greatly more ancient than the days of old Vitruvius himself, as the following extract from the writings of that most judicious author, amply testify.

“In the magnificent and spacious city of Ephesus,” says that author, “an ancient law was made by the ancestors of the inhabitants, hard, indeed, in its nature, but nevertheless equitable. When an architect was entrusted with the execution of a public work, an estimate thereof being lodged in the hands of the magistrate, his property was held as security until the work was finished. If, when finished, the expense did not exceed the estimate, he was complimented with decrees and honors. So when the excess did not amount to more than a fourth part of the original estimate, no punishment was inflicted. But when more than one-fourth of the estimate was exceeded, he was required to pay the excess out of his own pocket. Would to God that such a law existed among the Roman

people, not only in respect of their public, but also of their private buildings, for then the unskillful could not commit their depredations with impunity, and those who were the most skillful in the intricacies of the art, would follow the profession. Proprietors would not be led into an extravagant expenditure, so as to cause their ruin. Architects, themselves, from the dread of punishment, would be more careful in their calculations, and the proprietor would complete his building for that sum, or a little more, which he could afford to expend. Those who can conveniently afford to expend a given sum on any work, with the pleasing expectation of seeing it completed, would cheerfully add one-fourth more; but when they find themselves burdened with the addition of half, or even more than half the expense originally contemplated, losing their spirits, and sacrificing what has been already laid out, they incline to desist from its completion."

But on the other hand, it not unfrequently happens that complaints of this kind are most unjustly preferred against the architect, who is often in this respect more sinned against than sinning. How often are his designs cut down and denuded of their fair proportions in order to effect some trifling saving in expense? and after being contracted for in their modified form, how frequently does it occur that, during the progress of the work, one item is ordered after another, by the proprietor, without due regard to the effect which these will have upon what has already been done? and the result is, that the whole becomes an incongruous piece of patchwork; and there remains the mortifying reflection that in consequence of the contracts having been interfered with, the "bills of extra work," added to the estimate, greatly exceed the sum that would have served to complete the original well-matured design. To the architect imbued with a true feeling for his art, nothing can be more tantalizing than such a result, for which he is in no way responsible, and for which he is often most unjustly blamed. It is always unwise, and seldom very safe, to interfere with plans after the work has been contracted for and fairly commenced. None but those in the practice of design, can conceive how entirely one part hangs on another, and how dangerous it is to interfere with any architectural work after it is in progress. While only on paper, it may be modified or reconstructed as often as circumstances require, as, in this case, the effect of any alteration is at once seen and provided for, by a re-adjustment of the other portions, until the whole is brought into harmony. But when once contracted for, the design ought to be inviolable. Alterations in these circumstances are always costly, and the architect would do well to set his face resolutely against them. This may at times, be a delicate task, requiring tact and judgment, but it is a duty which no architect who values his reputation should shrink from performing.

Where economy requires to be very closely studied, the old Vitruvian rule of avoiding materials which are not easily procured and prepared on the spot, is still the most effective, and of most general application. The building materials of the neighborhood, besides being the cheapest, generally harmonise better with the landscape, than those which are foreign to the soil. England's brick mansions of the olden time, however beautiful amidst their "tall ancestral trees," would ill accord with the stern clime and rugged scenery of the north. In ordinary cases, therefore, where mere general effect is all that can be aimed at, the building materials of the district, being not only less costly, but more artistic and effective, are to be preferred.

All ornamentation, where economy is an object, should be dispensed with; for unless fully carried out, it but serves to betray the poverty which it is meant to hide. Simplicity of outline, and a due proportion of the several forms, add nothing to the cost; and where these are properly attended to, the result will generally prove satisfactory.

Admitting then, to the fullest extent, the importance of the question, in its proper place,

which forms the subject of this paper, I have endeavored, on the one hand, to point out the very injurious effects to architecture, as a branch of the fine arts, which follow from giving it the precedence of all our other inquiries. Its tendency is to degrade art, and to cover the country with monuments interesting to archæologists only as marking the money-loving spirit of their epoch, and the low state of the art at the time.

On the other hand, I have endeavored to point out the proper period at which the all-important question as to cost ought to be determined, and the no less injurious effects which a wrong solution of the problem has upon art, and the necessity there is of the architect being thoroughly qualified to form correct estimates of the value of building materials and of labor, so that he may be able to adjust his design to the money proposed to be expended.

These remarks, it is true, do not directly bear on the principles of art or architecture, and they may in consequence appear to some, to be of too humble a nature to form the subject of a paper. But if I have succeeded in conveying in any degree, a just sense of the importance, in architectural design, of limiting to its proper place the question "What will it cost," and of giving it, in its own place, a full and honest answer, I shall feel that my labors, however humble, have not been altogether in vain. DAVID COUSIN.

THE NEW DAISY CHRYSANTHEMUMS.

THE old varieties of the Chrysanthemums, (popularly known by many as *Artemesias*,) have long been inmates of our gardens and green-houses—where they are esteemed for cheating even November and December, (those two dreariest months of the year to the devotees of Flora,) into something like a gay appearance.

Some new varieties have lately been introduced into this country, so distinct in their appearance, as, at first sight, to be scarcely recognized as the same flowers. We mean the *Daisy Chrysanthemums*—of which the accompanying sketch of a bouquet of the different varieties, affords a good idea. The flowers, (shown exactly the natural size,) are so small, and so neatly formed, as to look far more like daisies, or quilled China Asters, than Chrysanthemums. The plants, too, are dwarf and bushy, occupying far less space in the green-house, than the old sorts. For the garden, they are, we believe, equally hardy with the latter.

All these small flowered Chrysanthemums have, we believe, been originated from seed by the French florists, from a variety called the "Chusan Daisy," brought out from China by Mr. FORTUNE.

Messrs. PARSONS, of Flushing, THORBURN, of New-York, and other leading florists, had pretty collections of these miniature, or Daisy Chrysanthemums, in bloom last autumn, and they may no doubt be had this spring at any of the large general nurseries, at very moderate prices.

We received last autumn, from Messrs. ELLWANGER & BARRY, of the Mount Hope Nurseries, Rochester, a small box, containing some exquisite blooms of these Daisy Chrysanthemums—so clear and pretty in color, and so *petite* and distinct in form, as to be mistaken at first sight for rare small asters. The following are the names of the sorts from Messrs. E. & B.:

Daphies.—Orimsom purple—quilled and prettily formed.

Circea.—Light pink—very delicate.



DAISY CHRYSANTHEMUMS.

La Fiancee.—Pure white—round and small, like a small white Daisy—one of the best.

Le Jongleur.—Yellow—with orange center.

Soulidelta.—Purplish pink and white—prettily shaded.

Le Safrajon.—Yellowish brown.

Eliza Miellez.—Light pink—open centre.

Eurinone.—Dark pink—good flower.

The following are excellent varieties of the Daisy Chrysanthemums, which are to be had in some of the nurseries:

Cupidon.—Light crimson—full double—inclining to purple.

Mignonetti.—Flower very double, imbricated—about half an inch in diameter—color lilac.

Picciolina.—Rosy white—regular in form—about three quarters of an inch in diameter.

Nivi.—Fine small crimson flower, about half an inch across.

Le Feu Follet.—Rich beautiful crimson—nearly an inch in diameter.

La Pygmes.—Yellow—full double—about half an inch broad.

Cora.—Color silvery, inclining to purple—flowers quite small.

REVIEWS.

WALKS AND TALKS OF AN AMERICAN FARMER IN ENGLAND, with Illustrations: By FRED. LAW OLMSTED. [Putnam's Family Library, No. III; price 25 cents.]

HERE is a book of travels with a smack of novelty about it. Mr. OLMSTED is one of our original young Yankee farmers, who, not being satisfied with knowing the old world, and its farming ways especially, through the books of literary men, set out to see Europe with his own eyes, and learn what he could by actual experience. Accordingly, he eschews railroads, post-coaches, and the like modern conveniences for reducing all the civilized world to one dead level of interest, and takes to his legs, to spy out the beauty as well as the nakedness of the mother country, for himself.

A very pleasant bit of travel he has made of it, with no dust in his eyes—for Mr. OLMSTED is one of the new school of American farmers, without a single old prejudice, wide awake on all questions of the times, and a believer in the largest interpretation of the future of the people. He looks around him with his democratic eyes wide open, and peers into all the musty and rotten corners of mother England, as well as many of her bright and glorious places, that she offers to the eyesight and reflection of all strangers. Traveling on foot, and thus entering into conversation, sometimes with relations of intimacy, with the heart of the people, is undoubtedly the true way of getting at the pith of weal and woe of a country. You free yourself, in this way, of the "company manners" of the nation, and see it in its homely, genuine, earnest life—the good and bad mixed, like wool and warp of individual character.

Mr. OLMSTED's book is extremely fresh and honest, and you travel along with him through the great lanes, and between hedges of hawthorns, snowy with blossoms. You talk with milk-maids about making cheese; with farmers about the misery they find in free trade, and with your neat landlady, who serves you with the mug of "home-brewed," quite as if you too, had your "short, crooked sapling for a walking stick," and were his fellow traveller on a "long jog."

Mr. OLMSTEAD is a bit of a poet, or rather he has other eyes for nature, besides those which he bestows on turnep fields and Short Horns. The following description of his "first glimpse of the country," after leaving Liverpool, is as genuinely, freshly natural, as the song of our Bob-o-link in rising from a clover field in a June morning.

"There we were right in the midst of it! The country—and such a country!—green, dripping, glistening, gorgeous! We stood dumb-stricken by its loveliness, as, from the bleak April and bare boughs we had left at home, broke upon us that English May—sunny, leafy, blooming May—in an English lane; with hedges, English hedges, hawthorn hedges, all in blossom; homely old farm-houses, quaint stables, and haystacks; the old church spire over the distant trees; the mild sun beaming through the watery atmosphere, and all so quiet—the only sounds the hum of bees and the crisp grass-tearing of a silken-skinned, real (unimported) Hereford cow over the hedge. No longer excited by daring to think we should see it, as we discussed the scheme round the old home-fire; no longer cheering ourselves with it in the stupid, tedious ship; no more forgetful of it in the bewilderment of the busy town—but there we were right in the midst of it; long time silent, and then speaking softly, as if it were enchantment indeed, we gazed upon it and breathed it—never to be forgotten.

"At length we walked on—rapidly—but frequently stopping, on one side and the other, like children in a garden; hedges still, with delicious fragrance on each side of us, and on, as far as we can see, true farm-fencing hedges; nothing trim, stiff, nice, and amateur-like, but the verdure broken, tufty, low, and natural. They are set on a ridge of earth thrown out from a ditch beside them, which raises and strengthens them as a fence. They are nearly all hawthorn, which is now covered in patches, as if after a slight fall of snow, with clusters of white or pink blossoms over its light green foliage. Here and there a holly bush, with bunches of scarlet berries, and a few other shrubs, mingle with it. A cart meets us—a real heavy, big-wheeled English cart; and English horses—real big, shaggy-hoofed, sleek, heavy English cart-horses; and a carter—a real apple-faced, smock-frocked, red-headed, wool-hatted carter—breeches, stockings, hob-nailed shoes, and "*Ge-e-up Dobbin*" English carter. Little birds hop along in the road before us, and we guess at their names, first of all electing one to be Robin red-breast. We study the flowers under the hedge, and determine them nothing else than primroses and butter-cups. Through the gates we admire the great, fat, clean-licked, contented-faced cows, and large, white, long-wooled sheep. What else was there? I cannot remember; but there was that altogether that made us forget our fatigue, disregard the rain, thoughtless of the way we were going, serious, happy, and grateful. And this excitement continued for many days.

"At length it becomes drenching again, we approach a stone spire. A stone house interrupts our view in front; the road winds round it, between it and another; turns again, and there on our left is the church—the old ivy-covered, brown-stone village church, with the yew tree—we knew it at once, and the heaped-up, green, old English churchyard. We turn to the right; there is the old old ale-house, long, low, thatched roof. We run in at the open door; there he sits, the same bluff and hearty old-fellow, with the long-stemmed pipe, and the foaming pewter mug on the little table before him. At the same moment with us comes in another man. He drops in a seat—raps with his whip. Enter a young woman, neat and trim, with exactly the white cap, smooth hair, shiny face, bright eyes, and red cheeks, we are looking for—" *Muggoyail, lass!*"

* * * * * "Mug of ale!—aye, that's it! Mug of ale!—Fill up! Fill up! and the toast shall be

"MERRIE ENGLAND! HURRAH!"

Another very perfect sketch of an English rural landscape, the squire's house, the conversation of the working class, and a bit of information for the farmer worked in, is the following morning stroll, after sleeping at the village Inn:

"I dressed, and worked my way through the dark, crooked stairs to the kitchen, where on a bright steel fender, I found my shoes dry and polished. I walked through the single short street of the hamlet. The houses were set closely together, with neat little gardens about them. They were of every age; one I noticed marked with the date 1630—about the time of the first settlement in Connecticut. It was of stone, narrow, with a steep roof covered with very small slates; the windows much wider than high, and filled with little panes of glass set in strips of lead. Except in this, and the materials of which it was built, it was not unlike some of the oldest houses that we yet see in our first Puritan villages, as Hadley and Wethersfield.

"A blackbird hopped before me, but did not whistle, and plenty of little birds were chirping on the walls and rose-bushes, but there was nothing like the singing we have at home of a spring morning. At the other end of the village was another inn—"The Blue Lion," I believe, and a tall hostler opening the stable doors, was dressed just as I wanted to see him—jockey-cap, long striped waistcoat, breeches and boots.

"As I returned, I saw the farmer that had been at the inn the night before, and asked him to let me see his cows. He said they were coming down the lane, and if I went with him I should meet them. Passing a group of well-built, neat, low buildings, he said they were the squire's kennels. They were intended for greyhounds, but he had pointers in them now.

"The squire's! But where's the squire's house?"

"Yon's the hall," pointing to a distant group of trees, above which a light smoke was rising straight up in the calm air, and a number of large black birds were rapidly rising and falling. "Yon's the hall; ye see the rooks."

"The rooks! Then those are rooks, are they?"

"Ay, be they—rooks—do ye not know what rooks be?"

"Yes, but we don't have them in America."

"No! not have rooks? They be main good in a pie, sir."

"We met the cows, of which there were about a dozen, driven by a boy towards the farm-house. Any one of them would have been considered remarkably fine in America. They were large and in good order; with soft, sleek skin, and like every cow I have seen in England, look as if they had just been polished up for exhibition. He could tell nothing of their breed, except of one, a handsome heifer, which he said came partly of Welsh stock. He took me across a field or two to look at a few cows of the squire's. They were finer than any of his, and seemed to be grade short-horns.

"The cows were driven into hovels, which he called *shippens*, and fastened at their mangers by a chain and ring sliding on an upright post (the latest fashion with us,) eight of them in an apartment, standing back to back. Three or four of his daughters came out to milk—very good looking, modest young women, dressed in long, loose, grey, homespun gowns. They had those high wooden tubs to milk in that we see in the old pictures of sentimental milkmaids. It seems constantly like dreaming, to see so many of these things that we have only known before in poetry or painting.

"The dairy-house and all the farm buildings were of brick, interworked with beams of wood, and thatched. They were very small, the farm being only of fifty acres, and the hay and grain always kept in stacks. The arrangements for saving manure were poor—much the same as on any tolerably good farm with us—a hollowed yard, with a pool of li-

quid on one side. He bought some dung and bones in Liverpool, but not much. He esteemed bones most highly, and said they did immense good hereabout. They made a sweeter, stronger, and more permanent pasture. Where he had applied them twelve years ago, at the rate of a ton to an acre, he could see their effects yet. He took me into an adjoining field, which, he said, was one of the best pastures in the village. It had been ploughed in narrow lands, and the ridges left high, when it was laid down. The sward was thicker, better *bottomed*, than any I ever saw in America. He sowed about a bushel of grass seeds to the acre, seeding down with oats. For cheese pasture, he valued white clover more than anything else, and had judged, from the taste of American cheese, that we did not have it. For meadows to be mowed for hay, he preferred sainfoin and ray-grass. He had lately underdrained some of his lowest land with good effect. His soil is mostly a stiff clay resting on a ledge of rocks."

Our agricultural readers, particularly those in grazing districts, will be especially interested in the following more detailed account of the use of bone manure on pasture lands, and the more, now that the beds of native phosphate of lime, discovered in New-Jersey and New-York, bid fair to give us a supply of this fertilizer at a rate that will enable us to use it profitably:

"The farms in the country over which we walked in Cheshire, were generally small, less, I should think, than one hundred acres. Frequently the farmer's family supplied all the labor upon them,—himself and his sons in the field, and his wife and daughters in the dairy—except that in the harvest month, one or two Irish reapers would be employed. The cows, in the summer, are kept during the day in distant pastures, and always at night in a home lot. During the cheese making season, which on these small farms is from the first of May till November, they are driven home and fastened in *shippens*, or sheds, between five and six o'clock, morning and night, and then milked by the girls, sometimes assisted by the men. On a farm of one hundred acres, fifteen to twenty cows are kept, and three persons are about an hour in milking them. From twenty to thirty gallons of milk, (say six quarts from each cow,) is expected to be obtained on an average, and about one pound of dried cheese from a gallon of milk. From two to five cwt. (of 112 lbs.) of cheese, may be made from the milk of each cow during the year. Three cwt. is thought a fair return on the best farms. In a moderately dry and temperate summer, more cheese is made than in one which is very wet.

"The pastures are generally looked upon as permanent; the night pastures are sometimes absolutely so, as it is supposed that they have not generally been broken up for many hundred years. During the last ten years the pasture lands have been very greatly, and, as they tell me, almost incredibly improved by the use of bone dust. It is applied in the quantity of from twenty to forty cwt. on an acre, as top dressing, and I was told that pastures on which it had been applied at the rate of a ton to an acre, eight or nine years ago, had continued as good, (or able on an average of the years to bear as many cows,) as similar land top-dressed with farm-yard dung every two years, probably at the rate of thirty cubic yards to an acre. There seems to be no doubt at all, that land to which *inch* bones were applied ten years ago, are yet much the better for it. They are usually applied in April, and the ground is lightly pastured, or perhaps not at all, until the following year. The effect, the farmers say, is not merely to make the growth stronger, but to make it sweeter; the cattle will even eat the weeds, which before they would not taste of. However, in poor land especially, it is found to encourage the growth of the more valuable grasses more than that of the weeds, so that the latter are crowded out, and a clean, thick, close turf is formed. If the ground has been drained, all these improvements are

much accelerated and increased. Upon newly *laid down* lands however, the effect is not so great; it is especially on old pastures, (from which the extraction of phosphates in the milk has been going on for ages sometimes, uninterruptedly,) that the improvement is most magical. The productive value of such lands is very frequently known to have been doubled by the first dressing of bones.

"Both boiled and raw bones are used, and though there is a general belief that the latter are more valuable, I do not hear of any experience that has shown it; on the contrary, I am told of one field which was dressed on different sides equally with each sort, and now, several years after, no difference has been observed in their effect. A comparison must, of course, be made by measure, as boiled bones are generally bought wet, and overweigh equal bulks of raw about 25 per cent. Dry bone-dust weighs from 45 to 50 lbs. to a bushel."

We believe every American goes abroad with the idea, that nowhere are the *people* at large so intelligent and well educated as his countrymen at home; and, take the population of the country at large, he is right. But at the same time, no educated and unprejudiced American can fail to be struck with the superior *manners* of the middle classes in Europe, to the corresponding class here, and the greater value placed upon the mere manner of doing a thing. This is, to be sure, the result of an old civilization in part—but also in part to the little pains taken among our people, generally, to cultivate the finer feelings. Only the intellect is cared for in the schools—and home education is almost unrecognized by the people at large. Mr. OLMSTED's remarks on the conversation of the women of the middle classes that he met, and which we fully corroborate, are as follows:

"There are peculiarities in the speech of these women that would distinguish them anywhere from native Americans. Perhaps the novelty of them is pleasing, but it has seemed to us that the speech of most of the people above the lowest class of laborers that we have met, is more agreeable and better than we often hear at home. Perhaps the climate may have effect in making the people more habitually animated—the utterance more distinct and varied. Sentences are more generally finished with a rising inflection, syllables are more forcibly accented, and quite often, as with our landlady, there is a rich musical tone in the conversational voice, to which we are not yet so much accustomed, but that it compels us to listen deferentially. I wonder that beauty of speech is not more thought of as an accomplishment. It is surely capable of great cultivation, and should not be forgotten in education.

"Except in the lower class, the choice of words seems often elegant, and we hear very few idiomatic phrases or provincialisms. Where we do notice them, in the class I am now speaking of, it would not seem an affectation of singular language in an educated person with us, but rather a fortunate command of vigorous Saxon words. We have never any difficulty in understanding them, while we do sometimes have to reconstruct our sentences, and find substitutes for some of our words, before we are plainly understood. The "II." difficulty is an exception to all this, with nearly all the people, except the most polished, that we have met."

The cleanliness and neatness of English people, is another point of civilization which strikes an American as essentially different from what he sees in the same persons, or even those of far greater means, at home.

Nothing is so disgusting in this country, or so great a reproach to the social refinement of the people, as the want of cleanliness in *servants* of our hotels and steamboats. Fine mirrors and carpets, silver forks, and immense *salons*—but servants in attendance daily, without a single clean article of clothing that would be tolerated in a stable in Eng-

land.* The following account of our author's embarrassment at the quantity of bathing utensils in a first-rate English private residence, and the anecdote that follows it, are significant commentaries on our short-comings in certain essential points of civilization—as we think, still unrecognized in this country generally, despite our superior popular education:

"The bed-chambers and dressing-rooms were furnished to look exceedingly cosy and comfortable, but there was nothing very remarkable about them, except perhaps the immense preparation made for washing the person. I confess if I had been quartered in one of them, I should have needed all my Yankee capabilities, to guess in what way I could make a good use of it.

"There is a story told of two members of our legislature that came from "the rural districts," and were fellow-lodgers. One of them was rather mortified by the rough appearance of his companion, who was of the "bone-and-sinew" sort, and by way of opening a conversation in which he could give him a few gentle hints, complained of the necessity which a Representative was under to pay so much for "washing." "How often do you shift?" said the Hon. Simon Pure. "Why of course I have to change my linen every day," he answered. "You do?" responded his unabashed friend. "Why, what an awful dirty man you must be! I can always make mine last a week."

The present condition of the tenant farmers in England, (and those who actually cultivate the land—above the laborers—are almost all tenants,) is far from being an enviable one. Free trade, which has benefitted largely the manufacturer, has borne down heavily on the farmer, and notwithstanding the improvements in farming, and the low price of labor, nothing can enable the tenant farmer to live, but a great reduction of the rents all over the country. Mr. OLMSTED thinks that the general introduction of thorough draining alone, during the last ten years, has saved England from a revolution; and it is certain that only those farmers who have large capital, and the most perfect system of farming, can make profit under the present and probable future condition of things in England. The consequence will inevitably be, the gradual breaking up of all heavily encumbered landed estates, and the greatly lowered value of the rents upon others. In the mean time, small farmers are swallowed up, and the laboring rural population is more and more driven to emigration.

Mr. OLMSTED deals with aristocracy, and especially with the law of primogeniture, with the spirit of a republican, who cannot see either rhyme or reason in them:

"Strange! I find this monstrous primogeniture seems natural and Heaven inspired law to Englishmen. I can conceive, how, in its origin, it might have been so—in the patriarchal state, where it was the general direction of the common inheritance, rather than the inheritance itself, that was taken by the eldest of each succeeding generation; but in modern civilized society, with its constant re-familization, and in England, especially, where the immediate isolated domiciliation of every newly-wedded pair, is deemed essential to harmony and happiness, it seems to me more naturally abhorrent and wrong than polygamy or chattel-slavery.

"Doubtless, if you take it up as a matter to be reasoned upon, there is much to be said for it, as there is for slavery, or, among the turks, for extra wiveing, I suppose; and first, I fully appreciate that without it, could in no way be sustained such noble buildings and grounds—national banner-bearers of dignity—schools of art, and systematic encouragement of art, and perhaps I should add, systematic, enterprising agricultural improvements, such as this of five thousand acres thorough-drained *in the best manner*, by the

* When will the keepers of our showy hotels, for instance, banish the dirty dish of hot-water, and dirtier towel, at the side table, into which everybody's fork is dipped, and with which it is afterwards wiped by the waiter.

conviction of its profit in one man's brain instead of fifty men's, as it must be with us. And finally, it may be that for some few, there is sustained by it a local home, a family nucleus, more permanently than it can be with us.

"But there is everything to be said against it too, that there is against an aristocratical government and society, for the customs of primogeniture and entail, are in fact the basis of aristocracy. And between an aristocratical government and society, with all its dignities and amenities, and refinements, and a democracy, with all its dangers and annoyances, and humiliations, I do not believe that any man that has had fair observation of our two countries, and who is not utterly faithless in God and man, a thorough coward, or whose judgment is not shamefully warped by prejudice, habit, or selfishness, can hesitate a moment. I think that few Englishmen, few even of the English nobility, and no English statesman, would advise us to return to their system. I think that most of them would be sorry to believe that England herself would fail of being a democratic nation a hundred years hence."

A little more personal contact with the class who hold the feudal tenure, would probably have convinced Mr. O. that "to possess power and not abuse it," is, as BURKE said, the greatest human virtue. High minded and truly noble as many of the English aristocracy are, it is, naturally, not easy for them to acknowledge the superiority of democracy to a constitutional monarchy and aristocracy, which in their eyes have made England the greatest nation. But, in the mean time, the world does not stand still, and the England of nineteen hundred, will not be the England of to-day. But as the greatness of England is in her moderation and common sense, we feel sure that she will gain more by that gradual change which all classes there admirably accommodate themselves to, than by those revolutionary spasms that agitate her neighbors across the channel, and subject them to the pity of the rest of mankind.

And now, having given our readers a taste of the quality of Mr. OLMSTED's book, we feel certain they will be inclined to walk and talk it out with our American farmer.

Foreign and Miscellaneous Notices.

ORNAMENTAL TREES OF PANAMA.—The most famous of all the ornamental plants is the *Couroupita odoratissima*. Seem., combining a most delicious fragrance with a splendid flower. In the Morro, a forest near the village of Rio Jesus, are four of these trees, which are considered by the inhabitants as the only ones that exist in the country, and the greatest curiosities Veraguas can boast; and, indeed, I myself have never observed them in any other locality. They form a group, and are vernacularly termed *Palos de Paraíso* (i.e., Paradise trees,) or *Granadillos*, deriving the former name from their beauty, and the latter from the close resemblance which their flowers bear in shape and size to those of *Granadilla* (*Passiflora quadrangularis*, Linn.) The trees are from 60 to 80 feet high, and up to an elevation of 20 feet, where the branches diverge, their stems are thickly covered with little sprouts, bearing, from February until May, blossoms, the odor of which is of so delightful and penetrating a nature, that in a

favorable breeze it may be perceived at nearly a mile's distance. The flowers are 1½ to 2 inches in diameter, and their petals are of a beautiful flesh-color with yellow stripes, contrasting charmingly with the golden stamens of the centre. The people of Veraguas, whose apathy is not easily roused by the beauties of Nature, often repair to these trees during their flowering season, in order to behold the bright tints of the blossoms, and enjoy the delicious perfume which they exhale. *Hooker's Journal of Botany.*

ACER CIRCINATUM.—This is a most beautiful hardy deciduous tree from Oregon, with purple and white flowers, and leaves rich crimson in the autumn. It was introduced by the Horticultural Society. There is probably no hardy tree in this country more eminently beautiful than this, if tree it can be called, for it seems rather a bush. In the spring, when its leaves unfold, they are preceded by long crimson leaf-scales, from two to four to each twig; the leaves

when they first come are thin, semi-transparent, and a clear light green; at the same time peep out little tufts of purple flowers, with white petals; and in the autumn the plant seems on fire with the rich red of the foliage, more rose-colored, and not less intense, than that of the most scarlet of Oaks. Sir William Hooker tells us that the species is found wild on the Great Rapids of the Columbia river, and is common along the north-west coast of North America, between lat 43° and 49°. Mr. Douglas observes that it is exclusively confined to the woody mountainous country that skirts the shores, and there, among the pine forests, it forms almost impenetrable thickets. The branches are pendulous and crooked, often taking root, as is the case with many species of the genus *Ficus*. Bark smooth, green when young, white when fully grown. The wood is fine, white, and close-grained, very tough and susceptible of a good polish. From the slender branches of this tree the native tribes make the boops of their *scoop-nets*, which are employed for taking salmon at the rapids, and in the contracted parts of the river. It is said to form a tree 20 to 40 feet high.—*Paxton's Flower Garden*.

ACER VILLOSUM.—A noble tree, from the Himalayas, with the aspect of a Sycamore. It was introduced by Messrs. Osborne and Co., of the Fulham Nursery. Dr. Wallich tells us that this is a very large tree, inhabiting the high Alps of India, approaching towards those of perpetual snow in Sirmore and Kamaon, ripening its fruits in November, at which time "the very fragrant flowers also begin to appear." Dr. Royle says it is only "seen with pines and birches on the loftiest mountains, which are for many months covered with snow." In its general appearance this may be compared to the common Sycamore, but is a much finer looking tree, its leaves being thicker, greener, and larger; besides which, they are covered with a close fur on the underside, although smooth above; in the autumn they assume a peculiar nankeen tint. The plants in the possession of Messrs. Osborne and Co. have not yet blossomed; but our Herbarium tells us that the "fragrant" flowers come out in close panicles, covered with long yellowish hairs. Undoubtedly this is one of the finest hardy deciduous trees yet introduced. It is to be hoped that India will soon yield us her other alpine Sycamores, of which there are three, viz: 1. *A. sterculiaceum*, Wallich, found near the summit of Mount Sheopore, and very like *A. villosum*, except that it is nearly destitute of hairs. The trunk of this is said to be three feet in diameter, and the flowers white. 2. *A. caudatum*, Wallich, so called because the palmate leaves have the lobes extended into tails. In this the leaves are scarcely more than three-lobed, and are sharply and doubly serrated. Dr. Wallich says it is a native of the highest regions of Nepal, towards Gossain Than, as also of Sirmore and Kamaon. Dr. Royle found it growing in company with *A.*

villosum. It is a remarkable and handsome species. 3. *A. cultratum*, Wallich, the leaves of which are heart shaped, and deeply divided into seven much acuminate *undivided* lobes, besides being much smaller and thinner than in the two preceding species. It is "a larger tree, native of the regions towards the Himalaya, in Kamaon and Srinaghur." Dr. Royle, who also found it, says that its wood "is white, light, and fine-grained." Dr. Wallich suggests its being allied to the *Acer pictum*, of Japan, to which we must add that it is little different from Bunge's *Acer truncatum*, from Northern China. *Paxton's Flower Garden*.

THE CEDRON TREE OF PANAMA.—A tree, which has attained great celebrity, is that called Cedron (Simaba Cedron, Planch.) The most ancient record of it which I can find is in the "History of the Buccaneers," an old work published in London, in the year 1699. Its use, as an antidote for snakes, and place of growth, are there distinctly stated; but whether on the authority of the natives, or accidentally discovered by the pirates, does not appear. If the former was the case, they must have learned it while on some of their cruises on the Magdalena, for in the Isthmus the very existence of the tree was unsuspected until about 1845, when Don Juan de Ansoatgui ascertained, by comparison, that the Cedron of Panama and Darien was identical with that of Carthagena. The virtues of its seeds, however, were known, years ago, from those fruits imported from the Magdalena, where, according to Mr. William Purdie, the plant grows in profusion about the village of San Pablo. In the Isthmus it is generally found on the outskirts of forests in almost every part of the country, but in greater abundance in Darien and Veraguas, than in Panama. The natives hold it in high esteem, and always carry a piece of the seed about with them. When a person is bitten, a little, mixed with water, is applied to the wound, and about two grains scraped into brandy, or, in the absence of it, into water, is administered internally. By following this treatment the bites of the most venomous snakes, scorpions, centipedes, and other noxious animals, have been unattended by dangerous consequences. Doses of it have also proved highly beneficial in cases of intermittent fever. The Cedron is a tree, from 12 to 16 feet high; its simple trunk is about 6 inches in diameter, and clothed on the top with long pinnated leaves, which give it the appearance of a Palm. Its flowers are greenish, and the fruit resembles very much an unripe Peach. Each seed, or cotyledon I should rather say, is sold in the chemists' shops of Panama for two or three reals (about 1s. or 1s. 6d. English.) and sometimes a much larger price is given for them.—*Hooker's Journal of Botany*.

VEGETATION OF BORNEO: ASCENT OF KINI-BALU.—The following interesting remarks are from a letter received by a correspondent from

Hugh Low, Esq., Colonial Secretary at Borneo, who has been the first to ascend the loftiest mountain of that island. The position of Kini-Balu is at the N.E. extremity of Borneo, in about 6° north lat., where it forms a most conspicuous feature from the ocean to the east, north, and south. It has hitherto erroneously been presumed to be volcanic, from its peculiarly steep summit, and the rugged crater-like ridges it presents on various sides, and probably as much from analogy, the lofty explored peaks of Java being invariably so. The discovery of its granitic structure is on this account the more interesting. To the botanist, Kini-Balu seems to afford a rival in Rhododendrons to the Himalaya, and in Pitcher plants to any known country. In the same communication, Mr. Low informs us that he intends again ascending the mountain, and, if possible, reaching a higher elevation. We wish this adventurous and intelligent explorer every success. Nothing is said of the difficulties and dangers that must have attended his journey from the coast to the foot of the mountain; they were doubtless many and severe, and we wait with anxiety for further particulars, which shall be laid at once before our readers. "Labuan, April 23, 1851. As, when I had the pleasure of meeting you in England, you expressed a wish to know something of the mountain Kini-Balu, I have now the pleasure to inform you, that I have sent to Colonel Butterworth, the Governor of the Straits, a small collection of plants made there by myself, on a visit I paid to the mountain last month, of which I beg your acceptance. I enclose in the same parcel two or three small pieces of the rocks from different parts of the hill, by which you will perceive that the mountain is granitic, and not volcanic, as has been generally supposed. The view of the hill by which it is best known gives it a conical form; but that, I am inclined to think, is from its having been principally observed from the westward, where the end only of the mountain is seen. I imagined I had gained the top of the south-west end, but such could not have been the case, as the height of the point I gained is by barometer only 8516; whereas the top, by triangulation had been found to be 18,500 feet.

[Captain Sir E. Belcher, who visited this locali-

ty in the Samarang, in 1844, and published, in his 'Narrative' of that voyage, an admirable view of the mountain, drawn on the spot, by Lieut. Browne, estimated its height, from observations made at Labuan, Ambong, Tampasook, Mantanani, and other places in the vicinity, to be 18,698 feet. Its summit was enveloped with mist, and from the difficulties which its outline and surrounding scenery presented, Captain Belcher did not attempt the ascent.] The highest parts are bare granite, and the ridge very narrow, the side to the northward being sheer precipice. Two or three Orchids were growing on the rock at the extreme point I gained, when the thermometer stood at 52° at noon of a fine day. [By this observation, the elevation reached by Mr. Low might have been assumed as between 8000 and 9000 feet.] The whole of the ascent is exceedingly steep, but with no places with any great difficulty to surmount, as far as I went. I remained two or three nights at an elevation of about 8000 feet, encamped under an overhanging rock, with a pretty considerable torrent rushing past it; the ravine of which was densely clothed with vegetation, including a fine yellow Rhododendron, forming a large shrub or small tree. In the same ravine grew also a Phyllocladus, a small leaved Dacrydium, and another curious Rhododendron, like a Heath.

One of the most remarkable plants was a new Dacrydium, which looked so much like a Spruce Fir, that I, at first, thought it must really be a cone-bearing plant. Of four species of Pitcher plant, one was of a very curious, and to me of quite a new form, and so large as to contain as much water as I could drink at a draught when thirsty, probably a pint; it was a strong growing species, and after a rather long search I found it in flower; but all my specimens of it, together with many others, were thrown away by my lazy followers, during the descent, which we found very severe, aggravated as it was by being made in very heavy rain. This Pitcher plant was not found high on the hill, not more than from 2000 to 4000 feet. In all, I saw thirteen species of Rhododendron, in a distance of about three miles; some of those on the lower parts of the mountain epiphytal, and all that were in flower exceedingly beautiful."—*Literary Gazette*.

Domestic Notices.

FRONTISPIECE—DESIGN FOR A FREE SCHOOL.

—In our JANUARY number we gave an original design for a district-school house, built of wood, in a simple, convenient and economical form, which we are glad to see has been extensively copied into other papers. As a cheap rural school-house, it is adapted to the country generally.

Our frontispiece to this number, shows how a school-house may be rendered highly architectural—where more means are at the disposal of the building committee. It is a design by Mr. MEYER, an English Architect, for the St. Helen Free School, and has been erected in the suburbs of London—very substantially, of brick, with stone dressings, for £1,200. The boys' school-room measures 59 by 27 feet, and the girls' school-room 42 by 27 feet. There is a separate porch and entrance to each, as shown on the elevation.

POUDRETTE AND GUANO.—DEAR SIR: As I notice that you endure questioning very patiently, I beg leave to propose one or two for answers in the Horticulturist for March. I wish to know:

1. Whether the Poudrette of the Lodi Company, 74 Cortland-street, New-York, is to be depended on, and is worth "\$2 a barrel, or \$1.50 for any quantity over six barrels;" what crop it is best adapted to, what quantity to be applied, &c.

2. The same information relative to the Bone dust and Peruvian guano advertised by New-York dealers. Yours, J. M. WINCHELL. *Syracuse, N. Y., Feb., 9, 1852.*

ANSWER.—We have tried the Lodi Company's Poudrette in various ways, in our own grounds, for the last three or four years, and for all the neater work of sowing and planting in gardens, we prefer it to any other manure. For strawberries, for early vegetables, flower beds, roses, &c., it is preferable to everything usually to be had; because, unlike guano, it enriches without burning, may be used safely with any plant, and brings no weeds, like common manure. We consider a barrel of it fully equal in fertilizing material to 4 cart-loads of stable ma-

nure—while being pulverised, it is much more readily managed in mixing it with light garden soil. For farm crops it is equally valuable whenever the farmer can afford to pay for manure at the rate of 75 cents a waggon load, and a barrel may, in using it, be considered equal to two such loads. It should be used in the hill for corn and potatoes, and the drill for beets and carrots.

Bone dust has not generally proved so valuable here as in England. Guano must be used in the fall, or *early* in the spring, or it is of little value—except in parts of the country where much rain falls in summer. We can say nothing about its quality, not having had any samples lately. ALLEN & Co., New-York, sent us a superior article last season.

THE STRAWBERRY IN ENGLAND.—Mr. Downing: I discover by a letter in your number for the present month, from a working English gardener, that we are behind the age in general, and Great Britain in particular, in horticulture. I would request your correspondent to enlighten us, by a description of the sexual character of the strawberry plant. I am told that in England, they follow in the footsteps of the world renowned Linnaeus—hold with him, that this plant always has blossoms perfect in both male and female organs; and all the English gardeners I have met with, adhere to the same doctrine, and can discover no sexual difference between the blossom of their world renowned Keen's Seedling, and Hovey's Seedling. They are compelled to admit, that where these two are planted together, that Hovey's produces a full crop of perfect fruit, whilst the Keen will not bear one-fifth of a crop. But this they say arises from our climate varying from that of England.

Now the presumption is, that these English gardeners must be right, as they tread in the footsteps of the greatest of all botanists, whilst we for our principles, depend on an ignorant German female, who supplied our market with strawberries, 80 years since. Her fruit was much larger, and her grounds produced five times the quantity, of any English gardener's

ground in the vicinity. They discovered this, and as she yearly threw vines on the road, they planted them, and strange to tell, not one of the plants ever bore a single fruit. True, when the supposed secret of the old woman was discovered, she got in a passion, and quit raising the strawberry, as the price was reduced from 25 cents to eight cents per quart, as the average rate of the best, declaring that she had thrown none but the rascally husbands on the highway, to deceive them. There may be something of "Rochester knockings" in this, or mesmerism, as some of our gardeners bring to our backwoods market, near 5000 quarts of strawberries in a single day, when no English gardener, who attends the market in the great cities of Gotham, Boston, or Philadelphia, send one-quarter the quantity. AN ENQUIRER. Cincinnati, Feb. 11, 1852.

NEW AND VALUABLE AMERICAN GRAPE.—Mr. Downing—As it is the horticultural fashion, at present, to abuse the one who may be instrumental in bringing forward any new plant or tree, by which an "amateur may be deprived of his two dollars," it is with some degree of hesitation that I venture even to allude to the fact, that there is a grape, or that there is *said to be a new seedling grape of American origin*, perfectly hardy in Massachusetts, and free from mildew, and that ripens before the Isabella or Diana. Now this may be another humbug, and I caution all the green ones, and all those that value their dollars, to wait, patiently, and let those who have become accustomed to trials of this kind, pay the piper, and make our experience public; if it proves a failure, it will not cost them much; if it is what it is represented to be, they can buy a vine then safely, provided they do not get the wrong kind, with the right name on the label. This grape is larger than the Diana, of a clearer red, and more closely resembles the Rose Chasselas than any thing. The fruit was sent me last autumn, two bunches, and I have never (to my taste) seen such grapes grown in this country in the open air. As they were shown me to obtain my opinion upon the fruit, I shall not say where it can be had, or any other matter that concerns would-be purchasers. I will add that I could not get a vine or cutting. It will be for sale by and by, no doubt. Yours, J. FISK ALLEN. Salem, Mass.

TEACHING IN SCHOOL-HOUSES.—I have for some time contemplated a remonstrance against one feature of the excellent Plan for a School-house recently given in the "Horticulturist," and re-produced in the "Cultivator." I refer to the division of the sexes contemplated in that scheme. Having been all my life, till within three or four years past, a teacher, and that with a design, if health permitted, of following the business as a *profession*, I feel naturally, a deep interest in the subject of *schools*. I regard the sphere of the *school*, as embracing a much wider range than the common routine of science, so called; it is the nursery of all the faculties—social and moral, as well as intellectual. And if any one thing conduces to a development of evil passions, and takes from the hands of the teacher one powerful aid that nature has given him, I believe it to be the separation of the sexes.

The influence of each on the other, is refining, elevating, and restraining; repressing evil tendencies, while it develops noble ones, and calls into action all that loftier kind of emulation joined by St. PAUL, and which is the living soul of the school-room. And this view is not that of a solitary, humble ex-pedagogue alone, but of the most successful of all our eminent teachers; the customs of some of our large cities to the contrary notwithstanding. In haste, yours truly, J. M. WINCHELL. Syracuse.

P. S.—By making one of your rooms a Primary, and the other a Senior department, your plan is admirably adapted to common schools.

[This is interesting, and we should be glad to hear the comments of other school teachers. ED.]

ERRATA.—In your last number, containing my article on "*the curled leaf of the peach*," there are two errors of the press. 1. At p. 65, line 18th from the bottom, the word *nominaly* is put for *normally*. 2. At p. 66, 19th line from the bottom, the word *renewed* is put in place of *removed*.

This last error is quite important, since the *renewal* of the covering ~~could~~ do no good, while its *removal* is needful to admit the sun to the roots of the trees. C. E. GOODRICH. Utica, Feb. 6, 1852.

THE PAST SEVERE WINTER.—We fear horticulturists, all over the country, will be forced

to remember the past winter as one of the most severe known in the United States for the last half century. Fahrenheit's thermometer has fallen as low as 28° below zero at Albany, 11° at New-York, and 4° at Washington. Wherever it has fallen to 12° below zero, the peach crop for the coming season has been destroyed in the germ, and though the blossom will open the fruit will not set. Many half-hardy plants which have stood the winters uninjured for fifteen years past, will be found greatly injured or killed entirely. The cold having extended all over the south—the harbors of Mobile and New-Orleans having been obstructed by ice, its bad effects will probably be more disastrously felt there than at the north. We fear the orange trees in Florida will be killed to the ground.

The following note from a correspondent will show, that near Philadelphia, the peach buds are only destroyed on the south side of the branches—thus proving that the injury is done by the sudden thawing, rather than by the extreme cold.

Dear Sir—The peach buds upon the upper sides of the branches, are all destroyed; those on the lower sides appear to be safe.

The evergreens have suffered severely; this season will prove to a certainty which is or is not hardy. The thermometer has been with us 10½° below zero at night, and only 8° above it during the day. I have never had to record such a degree of cold. Yours truly, R. Buist. *Rosedale Nurseries, near Philadelphia, Jan. 16, 1852.*

HORTICULTURAL SOCIETIES.—Dear Sir: Your "Working Gardener" correspondent in the January number of the *Horticulturist*, does not appear to be familiar with the rules and regulations of the "Pennsylvania Hort. Society." It is emphatically a gardener's society, aided by the wealthy and intelligent citizens of Philadelphia. There are one or more working gardeners on all the flower, fruit and vegetable committees. The committee of arrangement are all practical gardeners, who subdivide the general committee on exhibitions. The prize schedule is revised by a majority of gardeners. So that his sentence, "As gardeners have no direct influence with the gentlemen of those Societies" can in no way apply to that of the Pennsylvania Hort. Society. We have seen as fine fruit in

America as we ever saw in Europe, (Pine-apples excepted.) Show plants cannot, yet, be grown here as in England. Where are our *Ericas*, *Fuchsias*, *Pinuleas*, *Epacris* and many others? When your "working gardener" has a few of our summer suns over his head, he will find that plants go off in a night like the gourd of history. In England too, there are 100 growers and 50 competitors for one in the United States. It will also be another half century before any of our lady amateurs will pay £500 for a few plants to take to a show, as has been done in the vicinity of London. R. Buist. *Rosedale Nurseries, Philadelphia, Jan. 16, 1852.*

DEEP HOLES FOR TREES.—Dear Sir: In your November number, under head of Domestic Notices, are to be found excellent directions for transplanting trees, the best in fact I have ever met with, subject however, I think, to one objection; I allude to making deep holes well filled with old manure, rich soil, &c. This proposition I think will not bear the test of reason, although from its almost universal adoption, it requires some nerve to battle against it. For instance: You dig a hole three feet square and three feet deep, the first foot in depth being generally pretty good soil, and the other two feet a stiff clay. Well—fill up the hole with good soil and manure, and plant your tree on top of it according to directions. As surely as the needle points to the pole, so surely will the roots of your transplanted tree strike down into the rich compost prepared for it, and possibly it may thrive apace. In a wet season this fine deep hole will be half full of water, hopeless of exist; in a very dry season the roots will likely be burned up in your rich compost. However, your amateur don't believe a word of it. He rather likes that hole three feet deep and full of fat soil. 'Tis scientifically, thoroughly done. Well, your tree bears once, perhaps twice, and then somehow it goes backwards. The shoots dwindle, the leaves look sickly, the stock gets hide bound, covered with moss; in fact it is near death. My amateur scratches his head, passing around his tree, examines every inch above ground, possibly grubs around the roots a little, but finally gives it up as a mystery. Could his eyes have penetrated down in that fine deep hole of his, have seen the roots, rendered ten-

der by the rich nourishment they had feasted on, and by this time entirely consumed, writhing and striving to penetrate through the four clay walls of the cell into which they had been decoyed, their gnawing hunger, their vain struggles upward, he would not require to be puzzling his head so much about yellow blights and premature decline. The surface soil is the soil for roots; make that fat and loose, and lead your roots into it, and not into the bowels of the earth away from sun and air, and light. Having officiated at numerous funerals of this kind, I speak knowingly of the sad effects. Some years since, passing through a new peach orchard on a gentleman's country seat, a few miles from town, in rather a hurry, after a flock of quails, I went sock into one of those deep holes half full of water; on scrambling out and surveying the premises, I perceived numerous other excavations taking their winter soak in true amateur fashion, so giving the owner a hasty anathema, I trudged home rather in poor plight. However I consoled myself that there would be few peaches gathered there. It is now a pasture with some dead sticks marking the spot where peach roots were buried. Yours, respectfully, C. G. SIWERS. *Cincinnati, Jan. 19, 1852.*

Our correspondent is both right and wrong. He is right in saying that it is folly to dig deep holes in clay hard-pan, unless such hard-pan is broken up and the holes drained. The advice to dig deep holes, was based upon the supposition that the subsoil was one that would drain itself. Such is the fact in good soils generally, and where an exception occurs the practice must be varied.

In other cases there is great advantage in deepening the soil in the hole. It enables the roots to go down for nourishment out of the reach of the burning sun,—a great gain in a hot climate. Of course, if one could afford to trench *the whole garden or orchard*, we would always do so instead of preparing any holes at all—but where neither the trenching nor subsoil plowing is possible, then one must do the next best thing. After a while, of course the roots will entirely occupy the deeply prepared soil in the hole—but nothing then prevents those nearest the surface from striking out in the surface soil, and gaining all that can be gained thereby. For the rest, we think it quite as likely that the peach

trees our correspondent refers to were killed by *deep planting*, as by the deep soil into which they were put. The first, kills thousands of trees annually. We never knew a single tree killed by the latter.

DESTRUCTION OF PEACH BUDS.—Dec. 27th exhibited the coldest morning of the present winter. At three o'clock A.M., the thermometer stood at 22° below zero; at daylight at 17°, the wind having changed to the east, meanwhile. Previously to this severe weather a large portion of the fruit buds of the peach, retained their vitality. Immediately subsequent to that day, they were generally dead. I have a few very strong seedlings, however, that are yet safe. C. E. GOODRICH. *Utica, Feb. 6, 1851.*

VENTILATION.—The public are by degrees waking up from the lethargy into which they have sunk, regarding the uses and necessity of a supply of pure air to breathe. The following true and straight forward article from the *Tribune*, is well worthy of perusal and reperusal. Pale faces and "nervous complaints," more common among our countrymen, and especially countrywomen, than among any civilized people on the globe, are the effects of a total ignorance of all the laws of respiration, and a blind passion for close stoves and furnaces. There is not a railroad car in the country, heated by its red hot stove, which is not an enemy to health, more to be dreaded than the cholera—and yet our people sit still and drink in the poison of air, expelled again and again from the lungs of those crowded around them, as if the thing were either delightful or irremediable. ED.

The fundamental truth that air inhaled by breathing is essential to the preservation of animal, including human life, we may fairly presume to be generally understood. If any one could be found to doubt it, he might easily be convinced by trying the experiment of *not* breathing for two or three minutes. But the intimately related and equally important truths that every human being has lungs, or air chambers, wherein the inhaled air or breath is consumed or worked over by a process akin to combustion—that the oxygen which forms one-fifth of the air is thereby extracted from the residuum, or nitrogen, and employed to clarify the blood of its constantly accumulating impurities—that the blood which, thus freshly renovated with oxygen, has been ejected into the arteries of a bright red color, and in a thoroughly liquid state, is returned thorough the veins

saturated with carbon and other impurities, and thence dark, sluggish and clotted—that it must now be renovated by fresh air, containing a large proportion of oxygen, for which purpose the air already in the lungs or once inhaled and respired therefrom is no fitter than the ashes of yesterday's fuel would be to make a new fire for to-day—that for this purpose every adult, healthy human being needs to inhale about eighteen breaths per minute of about one pint of fresh, pure air each, making over two gallons of air per minute—and that the inhalation instead of air already deprived of oxygen and loaded with impurities by respiration is a process alike baneful to health, strength and life—these truths are *not* generally understood, or their importance could not fail to be realized and respected. It is not possible that men and women would consent to be shut up in a close, crowded, low-roofed car, having possibly one or two small, utterly inadequate apertures for the escape of vitiated air, but none at all for the ingress of that which is pure, and that, while thus poisoning themselves, they would raise a row against any one who should kindly and slightly raise the window by his side, if they only knew what they were doing. Nor would they build costly churches and commodious halls for public meetings, and there huddle for hours, enduring discomfort and imbibing the seeds of fatal disease, if they only knew that copious ventilation was the very first requirement for such halls, and that they might far better, even during a tempest, sit there without any roof at all over their heads than with a roof which imprisons and returns upon their lungs the poisonous, corrupting exhalations from their own chests and bodies.

So with private dwellings. A man has toiled hard and long for a competence, and, having finally attained it, resolves to build a house after his own heart. He grudges no expense to secure an agreeable location and prospect, pure water, spacious rooms, tasteful draperies, ample bedding, elegant furniture, &c., &c., providing carefully and bountifully for every want but the first and greatest of all—pure fresh air. He might have secured this in every room of his mansion for some paltry twenty or thirty dollars; yet he neglects it and leaves his children to fester in their own corruption night after night until they finally sicken and die, for want of that element which God abundantly and freely supplied for their sustenance, but which he in his dense ignorance has perversely shut out and rejected.

Our architects, so called, are shamefully in fault in the premises. They have no right to be ignorant of the necessity for ample ventilation; and if not ignorant, they have no right to construct slaughter-pens and coffins where they are paid for erecting proper dwellings. They have no business to plead, "My employer did not want ventilation;" for if they know their own business they know full well that he vitally needed it, though the density of his ignorance

prevented his *desiring* it. They are paid to know what he does not; and they should never draw the plan of an edifice of any kind without providing for its thorough ventilation as a matter of course. Should the employer interpose objections, (which he rarely will,) it is their duty to enlighten and convert him. If he should insist on exalting his obstinate stupidity above the architect's scientific knowledge and practiced skill, (which not one in a hundred will do,) the latter should quietly say, "Sir, I have studied faithfully and labored hard to acquire the requisite knowledge of architecture; if you think I have not succeeded, please employ some one else; but if I direct the construction of this house, it must be thoroughly ventilated; I cannot in good conscience be responsible for any other."

"Why," says Thickskull, "whence comes all this clamor about ventilation? If it is so vital a matter, why did not our wise ancestors know something about it? Why didn't the want of it kill *them*, I'd like to know? I mistrust it's one of the new-fangled '*isms*, and closely related to socialism and infidelity!"

Most conservative Thickskull, your forefathers did not thrive in the absence of ventilation, but *because they had it*. It is precisely because we have all departed, necessarily and irrevocably, from their habits that special attention to ventilation has become so necessary. They lived far more in the open air and less in crowded assemblages than the present generation does; they sat around huge firesides which voraciously sucked all the vitiated air up chimney. They slept oftentimes in spacious unpartitioned chambers and garrets, whence the stars were visible through the crevices in the sides or roof. Such bed-rooms needed no ventilators—need none now. The mischief is that you cannot have them or will not sleep in them. The hospitable old fire place has been narrowed and lowered, or has given place to a stove or furnace; the bed-room is ceiled and papered; the doors are listed, the floors caulked, and the modern house, though in some respects more commodious and comfortable, is far less healthful and invigorating than those which it has supplanted. Hence the necessity for special regard to ventilation. There were hovels and dens of old, mainly in cities, where the poor herded in atmosphere fouler if possible than that of our modern churches during service, and of our mansions on soiree nights; and from these Spotted Fever, Black Death, Plague, and other pestilences went forth to devastate the world. If you want these results of the wisdom of our ancestors back again, just blunder on in defiance of the monitions of science respecting respiration and air, and you will very probably be accommodated.

GROWTH BY MAGIC.—All Paris has been marvelling, for some time past, at the exhibition, by a M. HERBERT, of a process by which the this gentleman causes the blossoms of plants to

burst into bloom *instantaneously*. No one has been able to penetrate the secret of the "discovery," as it is called,—legerdemain, as it probably ought to be called. The following account by an eye witness, (the correspondent of the St. Louis Republican,) gives the impression made upon the speculators, which is certainly very curious.

And now let me tell you of a most beautiful and interesting discovery which has lately been made by a celebrated Parisian horticulturist by the name of Hebert. I was persuaded to go to his rooms a few days since, and I assure you I had no reason to regret the long walk I had taken. Beneath a large glass case, four or five feet in height, and as many in circumference, were placed pots of roses, japonicas, pinks, dahlias, china asters, &c., &c., all in bud. By means of a certain gas, invented by himself, and which is made to pass by a gutta percha tube to any pot required, Mr. Hebert causes the instantaneous blooming of the flowers. The ladies in the room asked successively for roses, dahlias, and japonicas, and saw them burst into full bloom and beauty, in a second. It was really wonderful. Mr. Hebert is now trying to improve on his discovery, and to make the gas more portable and its application less visible. The secret is, of course his, and his rooms are crowded every day with the most delighted spectators. I wish I could send you the lovely camellia which I received, which, when asked for was so tightly enveloped in the green leaves of its calix, that the color of its flower could not even be guessed at; and yet the request was hardly out of my lips when the beautiful white camellia was in my hand. When he has made a little more progress, Mr. Hebert intends to get out a patent and deliver his discovery to the public.

GARDENERS—SO CALLED.—Mr. ELLIOTT, in the first number of the *Ohio Farmer*, comments on our complaint of the scarcity of really good gardeners—who understand the nature of our climate, as follows:

Amateur cultivators of ornamental trees, shrubs, plants, etc., in Ohio, and farther west, we opine, have cause for complaint far beyond our friends on the sea shore. Here we have men applying for situations as "head gardeners," claiming to know *all* about the cultivation of every variety of tree or shrub, how to arrange and plant out grounds, &c., &c., when in truth they are incapable of planting a tree successfully, know nothing how to make a cutting or layer for propagation, have never studied vegetable physiology sufficient to know aught of the nature and habits of plants; and yet these men, talking large, obtain situations, and because they do not succeed, the proprietor, who often has little time to give his grounds, becomes discouraged, and unless more successful the second

than the first year, abandons further improvement.

If state experimental gardens and farms, under the superintendence of a competent board of managers, and supported at the expense of the state, were established, emigrants as well as aspirants to the art of our own country, could labor and study for a season or seasons, until they acquired such proficiency in the practice, and knowledge theoretical, as to enable the board of managers to give them a certificate, and send them out fitted to meet the real wants of zealous but inexperienced amateurs.

We hope to see our own Ohio take hold of this subject, and that other States throughout the Union will follow her example.

ALBANY AND RENSSELAER HORT. SOCIETY.—

The annual meeting of the society was held at the State Agricultural Rooms, February 4th, 1852—V. P. Douw, President, in the chair.

The Treasurer, Mr. Tucker, presented his report:—

Receipts.....	\$204 68
Disbursements.....	191 01
	\$13 67

Messrs. Wilson, Kirtland, E. Corning, Jr., J. S. Gould, Mayell and Menand, were appointed a committee of nomination.

Mr. Wilson, from the committee, reported the names of the following persons for officers for the ensuing year, who were duly elected:—

President—HERMAN WENDELL, M. D.

Vice-Presidents—E. P. Prentice, E. B. Kirtland, D. T. Vail, Wm. Newcomb.

Secretary—B. P. Johnson.

Treasurer—Luther Tucker.

Managers—V. P. Douw, J. McD. McIntyre, J. M. Lovett, L. Menand, E. Corning, Jr., C. P. Williams, A. F. Chatfield, J. S. Gould, E. Door.

On motion of Mr. Newcomb, a vote of thanks was tendered to V. P. Douw, Esq., for the efficient and satisfactory manner in which he had discharged the duties of the office of President of the Society, for the past two years.

The following resolution was adopted:

Resolved, That it be recommended to those to whom premiums shall be awarded during the year, to leave the same in the Treasurer's hands, to form a permanent fund for the benefit of the Society, and thus enable it to increase its means of usefulness.

The constitution of the Society was amended by making the annual fee of membership \$1, instead of \$2, as heretofore.

Meetings and exhibitions for 1852, are to be held on the 22d June, 6th July, and 14th and 15th September. Annual meeting, third Wednesday of February, 1853.

A premium list for 1852 was adopted. This is to be printed in pamphlet form.

The members present took tickets to the amount of \$70, and more interest was manifested in the advancement of the Horticultural interest, than at any former period.

The Secretary was directed to prepare the Constitution, By-Laws, and Premium list for publication, for the use of members.

The following reports of committees, and awards of premiums were made:

FRUIT.—The committee on fruit report that they have examined the several collections of fruit exhibited, and have awarded the premium for the largest and best collection to Dr. Henry Slack, of Guilderland, and the premium for the second largest and second best to Wm. Newcomb, of Pittstown.

They also recommend for complimentary notice two several displays of grapes exhibited by E. A. Wood, of Watervliet, and David Cary, of Albany.

FLOWERS.—The committee have awarded the premiums as follows:—

To L. Menand, for best six plants in pots, \$3.

To L. Menand, for best display of cut flowers, \$3.

To E. Corning, jr., for best flat bouquet for vase, \$3.

To Jas. Wilson, for largest display of cut camellia japonicas, \$3.

To E. Corning, jr., for best six varieties, viz: Prattii, Double White, Lady Hume, Imbricata, Fimbriata and Henri Favre, \$3.

To L. Menand, for best three varieties, viz: Fordii, Lady Hume and Amabilis, \$1.

To E. Corning, jr., for best three primroses, \$1.

PENNSYLVANIA HORT. SOCIETY.—The stated meeting of this society was held at the Chinese Saloon, Philadelphia, February 17, 1852. Gen. Patterson, in assuming the chair, took occasion to indulge in some appropriate remarks, tendering his sincere thanks to the society for his unsolicited election to the office of President, observing that he could foresee the obstacles that would be presented, by following in the

footsteps of no ordinary man; that the standard for efficiency in office was now placed so high, and he, from his long absence, being in a great measure a stranger in the community, he hoped that his administration would be looked upon with a lenient eye; and he would claim the indulgence of the society towards any errors of commission or omission that might occur in the performance of his duty.

The display was excellent for the season, and consisted of a collection of plants—fine specimens of Azaleas, Spiræas, Ericas, Cinerarias, &c., from Joseph Lovering's houses. A number of large, and very handsome Camellias, from Frederick Lenning's. A collection of select rare plants—the *Illicium religiosum*, *Salvia gesneriæflora*, (a choice species,) *Camellia j. var. Collettii*, by R. R. Scott, gardener to J. F. Know. A large oblong stand of four elevations, covered with moss, in which luxuriated some fifty Hyacinths of choice varieties, was shown by Peter Raabe.

The designs of cut flowers and bouquets were creditable. A tall vase-shaped design of choice flowers, was shown by James Dundas' gardener; a beautiful large cone bouquet, crowned with a bud of the Victoria, the forty-sixth from the same plant, and a handsome basket, by Caleb Cope's gardener; a fine basket and hand bouquet, by Joseph Ripka's gardener; another beautiful basket and hand bouquet, by R. Cornelius' gardener. Collections of cut Camellia flowers were exhibited by John Sherwood, Robert Buist, James Ritchie, John Pollock, gardener to F. Lennig, and Benjamin Gulliss.

Fruit consisted of "Eschasserie and Easter Beurre," by Thos. Hancock; the "Nile's" pear, by W. V. Pettit, and a beautiful apple of good quality, brought from Paris, and presented by Chas. Crugan.

Two large tables of vegetables were exhibited by R. Cornelius' and Miss Gratz's gardeners; and forced Rhubarb and early Radishes, by Joseph Ripka's gardener.

The standing committees made their awards for the evening.

The special committee to which was referred the subject of a testimonial to the late President, reported that he be requested to sit for his likeness, which was agreed to, and ordered to be carried into effect.

A resolution authorizing the committee for establishing the names of fruits, to procure model fruits, was adopted.

A package of seeds obtained at the World's Fair, was presented by Thomas Fisher, and the thanks of the society was ordered for the gift, and seeds referred to the committee for distribution.

A member gave notice that at the next meeting he would move for the appointment of a committee to examine and report upon the condition of the Green-houses of the city and vicinity.

The President appointed the standing committees for the year.

On motion adjourned.

THOMAS P. JAMES, Rec. Sec'y.

BUFFALO HORTICULTURAL SOCIETY.—The annual meeting was held January 6th, Vice President Bryant presiding. A communication was received from the President, B. Hodge, declining a re-election, and the following officers and committees were elected for the ensuing year:

President—ABNER BRYANT.

Vice-Presidents—1st. Charles Taintor. 2d. Warren Granger.

Treasurer—Austin A. Howard.

Cor. Secretary—William R. Coppock.

Rec. Secretary—John B. Eaton.

Committee on Fruits and Fruit Trees.—Benj. Hodge, Chas. Taintor, Geo. F. Pratt, Jos. G. Masten, Warren Granger.

Committee on Flowers and Flowering Plants.—Wm. R. Coppock, Jas. W. Brown, Isaac F. Bryant, Elijah Ford, A. Mason.

Committee on Vegetables.—Jason Sexton, H. W. Rogers, Jno. R. Prince, Jos. Dart, Orlando Allen.

Committee on Entomology and Manures.—Lewis F. Allen, William Treat, S. T. Haven.

Council.—Abner Bryant, Charles Taintor, Austin A. Howard, Benj. Hodge, Jason Sexton, Warren Granger, John B. Eaton, William R. Coppock, Lewis F. Allen.

The Society will hold its annual exhibition on the 14th and 15th of September, and the semi-annual, on the 22d and 23d of June. Jno. B. EATON, Rec. Secretary.

CINCINNATI HORT. SOCIETY.—This Association held its annual election on the first Saturday in the year, when the reports of the finan-

cial officers were rendered, and ordered to be filed.

The President made a touching valedictory, and then stated that the polls were about to be opened; appointed as tellers, M. Kelly, and J. Gilmore.

On counting the ballots, the following persons were declared duly elected:

President—STEPHEN MOSHER.

Vice-Presidents—N. B. Shaler, W. S. Hatch, Jacob Hoffner.

Treasurer—William Stoms.

Recording and Corresponding Secretary—J. A. Warder.

Council—M. McWilliams, S. M. Carter, Jno. G. Anthony, S. S. Jackson, T. H. Yeatman, Wm. Orange, M. Kelly.

The polls were then opened for the election of other officers, as directed by the constitution, on a separate ticket.

Flower Committee—William Heaver, Jno. McFadden, I. C. Ferris, S. S. Jackson, Thos. Knott.

Fruit Committee—T. V. Peticolas, William Orange, S. M. Carter, M. McWilliams, D. McAvoy.

Vegetable Committee—A. Worthington, Jacob Hoffner, Anthony Pfeiffer, Patrick Considine, R. B. Davies.

Wine Committee—J. P. Foote, J. Brace, S. Robert, L. Rehlfuss, Geo. Graham.

Financial Secretary—Henry Ives.

Answers to Correspondents.

BOOKS.—R. J. B., (Rushville, O.) The best work on the Trees of America published in this country, is MICHAUX's (advertised in this Journal lately.) The best original work written in the United States—though it applies only to the northern species, is *Emerson's Report on the Trees and Shrubs of Massachusetts*. You will find a description of all the most ornamental trees, both European and American, in our work on *Landscape Gardening*. Brown's work has never been completed, only the first volume having appeared.

MANURES.—A. W., (Galesburg, Ill.) In heavy soils, coal ashes is valuable for all fruit trees. It is specially adapted to the Cherry. In light soils, we would use it chiefly for the Cherry and Peach. Sawdust half-decayed, has some little value as manure, but its value would be much increased by mixing it with barn-yard manure, and fermenting all together. *B. Pell*. Your lawn, which has run down, would be more benefitted by covering it *immediately* with half-rotten stable manure, allowing it to lie evenly spread all over it for three weeks, and then rak-

ing off all but the finer parts, than by any other top dressing whatever. Guano is an excellent top dressing for a lawn if applied in the autumn, but if applied in the spring, though it benefits the grass greatly at first, it often causes it to burn up more rapidly in midsummer. If your lawn lies low, or has dampness enough in the soil to prevent the latter, then, of course, this does not apply.

Stocks.—*A Nurseryman*, (Bangor.) Grafting pears on apple stocks has been abandoned by all good growers, because the union is not permanent, and the tree is short-lived. The plum tree makes a more enduring stock for the peach at the north, or in heavy soils, than the peach itself, and is less liable to disease and insects. *A. W.*, (Galesburg.) The Angers Quince is chiefly prepared as a stock for dwarf pears, because it takes the bud easily, and grows more vigorously than the common quince. The latter answers very well when once budded.

Evergreens.—*G. M. T.*, (Hickory Park, Va.) To make your cedar grow equally fast with the other one, you must remove the soil at the extremity of the roots, and fill it with richer soil, mixed with leached ashes. *Amos Dean*. The Irish Yew is hardy about New-York—and does best in a northern, shaded exposure. There is no ornamental evergreen, on the whole so generally satisfactory, so hardy in all parts of the country, and so well adapted to all soils, as the Norway Spruce.

Deep Trees.—*A Michigan Subscriber*. If your apple trees which you are forced to bury a foot deeper than they stood, by raising the ground, are trees readily moved by all means lift them, and bring the roots as near the surface as before, as this covering them with so much earth is often fatal. If they cannot be lifted, then cover the roots for a very large space, with small stones, spreading earth over the top.

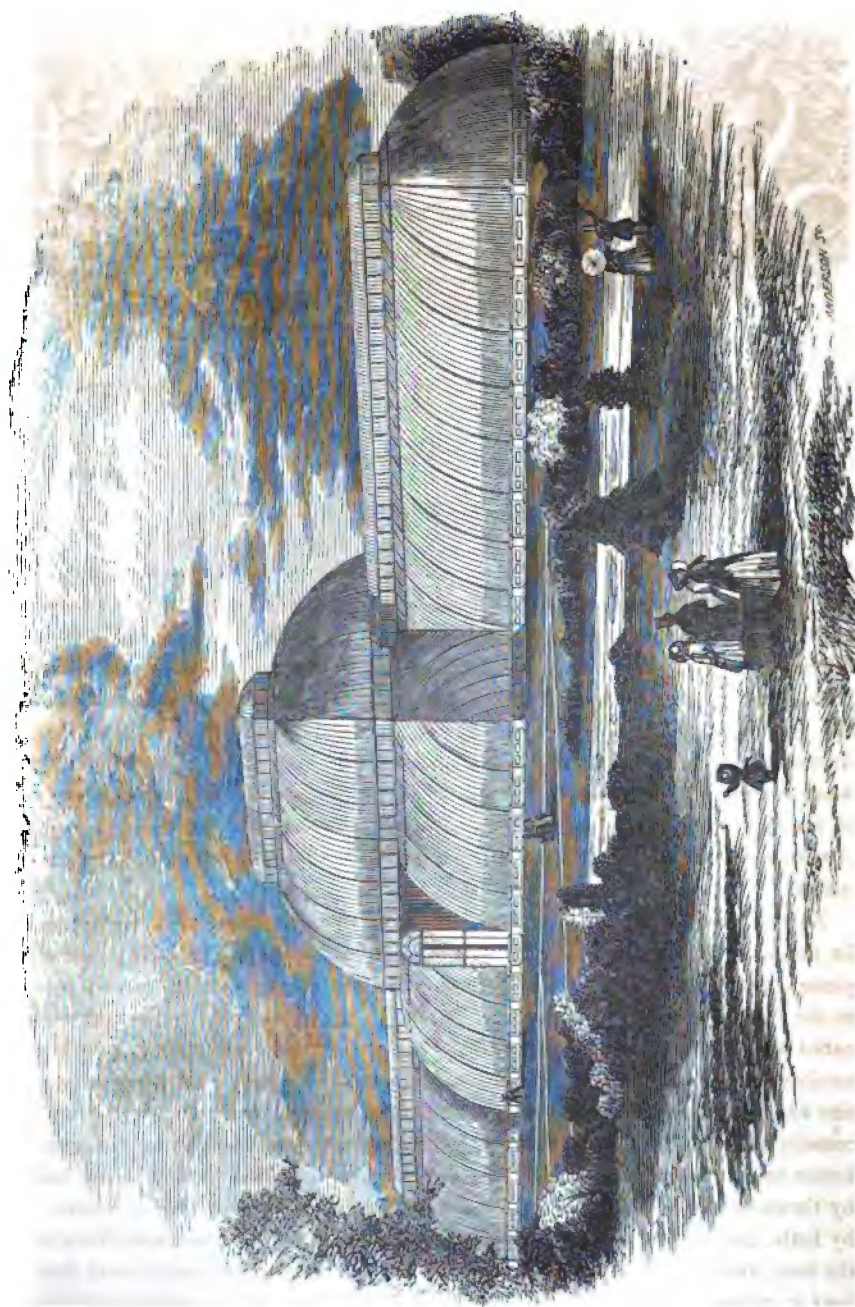
List of Trees.—*N. S. R.*, (Branchville, N. J.) We recommend the following for your "good gravelly loam" soil, in the northern part of New-Jersey. *Apples*.—Early Harvest, Early Strawberry, Red Astrachan, Porter, Fall Pip-

pin, Monmouth Pippin, Yellow Bellfleur, Rhode Island Greening, Melon, Ladies' Sweeting, Roxbury Russet, Baldwin. *Peaches*.—George IV, Early York, Old Mixon Free, Cooledge's Favorite, Late Red Rareripe, Snow, Morris White, Heath Cling. *Cherries*.—Black Tartarian, May Duke, Elton, Downer's Late, Graffion. *Apricots*.—Breda. Large Early, Moorpark. *J. J. Delchamps*, (Bel Espoir, Ala.) We recommend for the extreme south with some diffidence—but think the following varieties most valuable there. *Apples*.—Maiden's Blush, Early Harvest, White Bellfleur, Gravenstein, Bevan, Golden Russet, Horse Apple, Holland Pippin, Yellow Bellfleur, Porter, Grindstone, Dutch Mignonne, Pryor's Red. *Pears*.—Bartlett, Dearborn's Seedling, Surpass Virgalieu, Golden Beurre of Bilboa, Flemish Beauty, Heathcot, Louise Bonne de Jersey, Petre, Seckel, Winter Bonchretien, St. Germain, Lawrence, Duchess of Angouleme. Fruit trees raised from cuttings are not so good as those grafted on good stocks—they are less vigorous. Quince stocks are worth about \$12 a thousand in northern nurseries.

Green-house Plants.—*A Lady*, (Richmond, Va.) You will find in Buist's Select Catalogue of "Rare and Popular Green-house and Hot-house Plants," both the list and the information you require. (Address R. Buist, nurseryman, Phila., with 2 postage stamps enclosed.) This catalogue, just published, contains brief descriptions and hints for the cultivation of any genus of plants enumerated.

Arboretums.—*A. S.*, (New-York.) We recommend you to Messrs. PARSONS & Co., Flushing, Long-Island, to complete your list of rare trees. They have paid much attention lately, to importing rare trees for arboretums, and other choice collections.

Exotics.—*B.*, (New-York.)—The *Clerodendrons* and *Gardenias* you name, may be had of PARSONS & Co. *Cupressus Lambertiana* has not proved hardy about New-York. *Hedera Regneriana* is a new variety of Irish Ivy, with large foliage and rapid growth. May be had at several of the leading nurseries.



New Palm-house, Kew.

Hunt: April, 1852.

THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE.

On the Improvement of Vegetable Rares.

NOTWITHSTANDING all the drawbacks of the violent extremes of climate, the United States, and especially all that belt of country lying between the Mohawk and the James rivers, is probably as good a fruit country as can be found in the world. Whilst every American, travelling in the north of Europe, observes that very choice fruit, grown at great cost, and with the utmost care, is more certainly to be found in the gardens of the wealthy, than with us, he also notices that the broad-cast production of tolerably good fruit in orchards and gardens, is almost nothing in Europe, when compared to what is seen in America. As we have already stated, one-fourth of the skill and care expended on fruit culture in the north of Europe, bestowed in America, would absolutely load every table with the finest fruits of temperate climates.

As yet, however, we have not made any progress beyond common orchard culture. In the majority of cases, the orchard is planted, cultivated two or three years with the plough, pruned badly three or four times, and then left to itself. It is very true, that in the *fruit gardens*, which begin to surround some of our older cities, the well prepared soil, careful selection of varieties, judicious culture and pruning, have begun to awaken in the minds of the old fashioned cultivators a sense of astonishment as to the size and perfection to which certain fruits can be brought, which begins to react on the country at large. Little by little, the orchardists are beginning to be aware that it is better to plant fifty trees carefully, in well prepared soil, than to stick in five hundred, by thrusting the roots in narrow holes, to struggle out an imperfect existence; little by little, the horticultural shows and the markets, have proved that while fruit trees of the best standard sorts, cost no more than those of indifferent quality—the fruit they bear is worth ten times as much; and thus by degrees, the indifferent orchards are being renovated by grafting, manuring, or altogether displaced by new ones of superior quality.

Still, there are some important points in fruit culture overlooked. One of the most conspicuous of these is, that varieties may be found, or, if not existing, may be originated, to suit every portion of the United States. Because a fruit-grower in the State of Maine, or the State of Louisiana, does not find, after making trial of the fruits that are of the highest quality in New-York or Pennsylvania, that they are equally first rate with him, it by no means follows that such wished-for varieties may not be produced. Although there are a few sorts of fruits, like the Bartlett Pear, and the Roxbury Russet Apple, that seem to have a kind of cosmopolitan constitution, by which they are almost equally at home in a cool or a hot country, they are the exceptions, and not the rule. The English Gooseberries may be said not to be at home anywhere in our country, except in the cool, northern parts of New-England—Maine, for example. The foreign grape is fit for out-of-door culture no-where in the United States, and even the Newtown Pippin and the Spitzenberg apples, so unsurpassed on the Hudson, are worth little or nothing on the Delaware. On the other hand, in every part of the country, we see fruits constantly being originated—chance seedlings in the orchards, perfectly adapted to the climate and soil, and occasionally of very fine quality.

An apple tree which pleased the emigrant on his homestead on the Connecticut, is carried, by means of grafts, to his new land in Missouri, and it fails to produce the same fine pippins that it did at home. But he sows the *seeds* of that tree, and from among many of indifferent quality, he will often find one or more that shall not only equal or surpass its parent in all its ancient New-England flavor, but shall have a western constitution, to make that flavor permanent in the land of its birth.

In this way, and for the most part by the ordinary chances and results of culture, and without a direct application of a scientific system, what may be called the natural limits of any fruit tree or plant, may be largely *extended*. We say largely, because there are certain boundaries beyond which the plants of the tropics cannot be acclimated. The sugar cane cannot, by any process yet known, be naturalized on Lake Superior, or the Indian corn on Hudson's Bay. But every body at the South knows that the range of the sugar cane has been gradually extended northward, more than one hundred miles; and the Indian corn is cultivated now, even far north in Canada.

It is by watching these natural laws, as seen here and there in irregular examples, and reducing them to something like a system, and acting upon the principles which may be deduced from them, that we may labor diligently towards a certain result, and not trust to chance, groping about in the dark, blindly.

Although the two modes by which the production of a new variety of a fruit or flower—the first by saving the seeds of the very fruit only, and the other by *cross-breeding* when the flowers are about expanding—are very well known, and have been largely practiced by the florists and gardeners of Europe for many years, in bringing into existence most of the fine vegetables and flowers, and many of the fruits that we now possess, it is remarkable that little attention has been paid in all these efforts to *acclimating* the new sorts by scientific reproduction from seed. Thus, in the case of flowers—while the catalogues are filled with new Varbenas every year, no one, as we can learn, has endeavored to originate a *hardy* Verbena, though one of the trailing

purple species is a hardy herbaceous border flower—and perhaps hybrids might be raised between it and the scarlet sorts, that would be lasting and invaluable ornaments to the garden. So with the gooseberry. This fruit shrub, so fine in the damp climate of England, is so unsuited to the United States generally—or at least most of the English sorts are—that not one bush in twenty, bears fruit free from mildew. And yet, so far as we know, no horticulturist has attempted to naturalise the cultivated gooseberry in the only way it is likely to become naturalised, viz—by raising new varieties from seed in this country, so that they may have *American constitutions*, adapted to the American climate—and therefore not likely to mildew. The same thing is true of the foreign grape. Millions of roots of the foreign grapes have, first and last, been planted in the United States. Hardly one can be pointed to that actually “succeeds” in the open air culture—not from want of heat or light—for we have the greatest abundance of both; but from the want of constitutional adaptation. And still the foreign grape is abandoned, except for vineries, without a fair trial of the only modes by which it would naturally be hoped to acclimate it, viz—raising seedlings here, and crossing it with our best native sorts.

Every person interested in horticulture, must stumble upon facts almost daily, that teach us how much may be done by a new race or generation, in plants as well as men, that it is utterly out of the question for the old race to accomplish. Compare, in the Western States, the success of a colony of foreign emigrants in subduing the wilderness and mastering the land, with that of another company of our own race—say of New-Englanders. The one has to contend with all his old-world prejudices, habits of labor, modes of working; the other being “to the manor-born,” &c., siezes the Yankee axe, and the forest, for the first time, acknowledges its master. While the old-countryman is endeavoring to settle himself snugly, and make a little neighborhood comfortable, the American husbandman has cleared and harvested a whole state.

As in the man, so in the plant. A race should be adapted to the soil by being produced upon it, of the best possible materials. The latter is as indispensable as the first—as it will not wholly suffice that a man or a tree should be indigenous—or our American Indians, or our Chickasaw Plums, would never have given place to either the Caucasian race, or the luscious “Jefferson;”—but the best race being taken at the starting point, the highest utility and beauty will be found to spring from individuals adapted by birth, constitution, and education, to the country. Among a thousand native Americans, there may be nine hundred no better suited to labor of the body or brains, than so many Europeans—but there will be five or ten that will reach a higher level of adaptation, or to use a western phrase, “climb higher and dive deeper,” than any man out of America.

We are not going to be led into a physiological digression on the subject of the inextinguishable rights of a superior organization in certain men and races of men, which nature every day re-affirms, notwithstanding the socialistic and democratic theories of our politicians. But we will undertake to say, that if the races or plants were as much improved as they might be, and as much adapted to the various soils and climates of the Union, as they ought to be, there is not a single square mile in the United States,

that might not boast its peaches, melons, apples, grapes, and all the other luxuries of the garden now confined to a comparatively limited range.*

And this is not only the most interesting of all fields for the lover of the country and the garden, but it is that one precisely ready to be put in operation at *this season*. The month of April is the *blossoming season* over a large part of the country, and the blossom governs and fixes the character of the new race, by giving a character to the seed. Let those who are not already familiar with *hybridizing* and *cross-breeding* of plants—always effected when they are in bloom, read the chapter on this subject in our "Fruit Trees," or any other work which treats of this subject. Let them ascertain what are the desiderata for their soil and climate, which have not yet been supplied, and set about giving that character to the new seedlings, which a careful selection from the materials at hand, and a few moments light and pleasant occupation will afford. If the man who only made two blades of grass grow where one grew before, has been pronounced a benefactor to mankind, certainly he is far more so who originates a new variety of grain, vegetable, or fruit, adapted to a soil and climate where it before refused to grow—since thousands may continue to reap the benefit of the labors of the latter for an indefinite length of time, while the former has only the merit of being a good farmer for the time being.

ON THE DISEASES OF THE PEACH TREE.

BY W

I have been for a few years a slight observer of the disease, as it is manifested in this region, and which your correspondent, "C. E. GOODRICH, Utica," designates "the curled leaf on the peach tree." It may be that our peach trees are afflicted with a different disease from that mentioned by your correspondent, as it varies in many particulars from that described by him. And first, the trees having *serrated* leaves, are generally much more affected by the curl, than the glanded sorts; in some few cases, however, the glanded are more affected. But the effect on the after health of the tree, is *uniformly more injurious on trees whose leaves have not glands*. Again, the large uniform glanded leaves, are less liable to the curl, and the trees suffer, *afterwards*, less than any other.

The general symptoms of the disease resemble those described by your correspondent, with some additional ones, which I shall presently describe.

The disease is not owing to an exhausted soil. The character of our soil is threefold. On the flat, a rich black mold, with a sub-soil of clay or gravel; on our east hill, generally, a rich sandy loam; and on our south hill a heavy clay. On all these soils are to be found peach trees, varying in their age from fifteen to thirty years, and from eight to twelve inches in diameter—which are no more affected by the disease than those upon the various soils in localities which have never been cultivated until within the last 4 or 5 years.

* Nature is always giving us both hints and materials for this purpose. For instance, the peach, so common in our orchards all over the middle states, does not ripen well, and is rarely seen in northern New-England. Yet in a large garden of *seedling* peaches, that we saw in a cold part of Massachusetts, where all the better varieties had failed, there were three or four so perfectly hardy as to bear every year the finest crops. The fruit was only second rate—but by crossing with the hardier of the fine sorts, might in one generation have been rendered both hardy and delicious.

The disease, as exhibited here, is not owing to the winter, or the changes of temperature. Trees on the east or south wall of a house, which would be more liable to suffer from such causes, uniformly escape, whatever the character of the leaves.

In addition to the symptoms mentioned by your correspondent, if the disease with him is the same as with us—if he will go into his peach orchard in winter, and examine the last years' wood—he will find, principally near the base of the branch, blotches or warts varying in size from one-eighth to one-quarter of an inch in diameter. The smaller blotches are generally round, and unbroken mostly, and looking like a blister or burn—the larger ones generally elliptical in form—the bark within the ellipse entirely gone, and the woody parts bulged out, and sometimes slightly gummed. These blotches are frequently upon, and sometimes just under the bud—more frequently, however, on the branch between the buds. If your correspondent will again go into his orchard in the spring, shortly after the leaves have expanded, and the blossoms fallen, he will find, with the exception of those buds which have the blotches on or under them—the whole branch covered with the most luxuriant vegetation—the blotches, however, will be seen, as the season advances, to be gradually extending themselves in size, and those branches having many, or large ones, round the base of the stem, will be gradually encircled by a ring of dead bark; as soon as this happens, the leaves and branch beyond, all die. This occurs about the time that the curled leaves have dropped from the trees. After this, those trees which have not died, put forth fresh leaves, and make a healthy growth until the end of the season. When the months of July or August have arrived, (the precise time I have omitted to note,) if your correspondent will examine closely the wood of the current year, in places corresponding to those where he now finds the blotches above referred to—he will find pieces taken out of the young wood, as if eaten or bitten out; and if he will watch these punctures, he will find them gradually assume the appearance of those blotches which are now wanting bark.

If opened with a knife at this present time, by slight and successive slices, the outer blotch removed, presents a slightly discolored surface, which increases to the center of the branch, extending frequently up the branch a considerable distance, and accompanied, near the exterior surface, with a black line, similar to that seen in the plum knot—below the blotch; frequently the wood in the center is not discolored, and at some distance above presents the same healthy appearance.

Looking at this present time along the wood of two or three years growth, he will find the same elliptical shaped marks, indicating where the same injury has been inflicted for successive years.

Should your correspondent find the marks which I have hastily and imperfectly described, I suggest whether—

1. It may not be the puncture of an insect, and the blotch the nest for its young.
2. Whether the curl is not the old and long known disease mentioned and described by all authors, and particularly in DOWNING's work.
3. Whether amongst the remedies, the knife is not the most certain, and the time, at the annual shortening.
4. Whether the serrated leaf trees should not be wholly abandoned, and their place supplied with trees having glanded leaves. I have myself, almost entirely abandoned the cultivation of all trees having serrated leaves.

I have omitted to state, that in the spring, about the time the branch dies, the punctured part gums after a rain, as also the old blotches in the older wood.

Again, here, if the disease is permitted to progress, the trees surely die. I have seen many trees that have knots upon them almost as large as those on the plum.

By the way—should you deem this article worthy of publication—I would remark that the time to cut out the plum knot is the latter part of June, when the green knots begin to appear; if then cut out, running up and down all removing the scars on my trees, but are dead or dying.

thoroughly, (that is the black line run-
ed,) they will never return. I have
not a single knot—my neighbor's trees
W.



THE LARGEST DESSERT PEAR.

Few of the French pears, imported into this country fifteen or twenty years ago, have so well stood their ground in the public estimation, as the Dutchess of Angouleme. A natural seedling found growing in a hedge in a piece of woods near Angers, it has a robust habit of growth, and is well adapted to all the middle states, the west and the south. It should always be borne in mind, however, that the fruit never attains its highest flavor, at least in our gardens on this side of the Atlantic, except when the sort is grafted on a *quince* stock. Besides this, the large size of the fruit renders it much more likely to be blown off when grown standard high, on a pear stock, than when dwarfed on the quince.

We believe no fine flavored pear attains anything like the size of this: only the Catillac and one or two other cooking pears equalling it in this respect.

One object in referring to this variety at present, is to call attention to the perfection to which it is grown about Boston. Many cultivators there, train this variety upon an upright trellis, by which the utmost perfection of size and flavored is obtained. The cut herewith presented is an exact outline of a specimen grown by S. LEEDS, Esq., of Boston, and would not be considered of unusual size at the Horticultural Shows in that city. It weighed exactly one pound nine ounces, was of a deep golden yellow, with reddish brown specks on the surface of the skin, and excellent flavor.

CRITIQUE ON THE JANUARY HORTICULTURIST

BY JEFFREYS.

MR. EDITOR—A long interregnum has passed since my pen laid aside its meddling with your pages. Bodily ailments, a gouty limb—I *do* confess to a twinge of the gout, now and then, with other infirmities—and some little necessary travelling, have prevented my responses to the frequent calls of your correspondents, to whom, I trust my random scribblings have given less pain than pleasure. Should the former sensation at any future moment preponderate, or even a symptom of lassitude come over their spirits, in reading me, *exeunt omnes* will, in the phrase of the play, shut my further intrusion from their sight.

The Home Education of the Rural Districts.—This article speaks for itself—Major PATRICK included. "O that I (not mine enemy,) could write a book." That book should be on domestic education—not boarding-school *dissipation*, miscalled by the *true* term, instead! How I would score up the paltry, narrow pride of thousands of parents, who think—and act upon the thought—that the education of their daughters is accomplished only when they have taken a degree at some distant "Female Institute," fashionable "Seminary," or other fantastic place, (the schools are not *all* so, however,) where girls are spoiled in having all sorts of superficial nonsense put into their heads, instead of good, sound knowledge, and every-day common sense, which should fit them to excel in the sphere which Providence has marked out for them: and that of their boys, when sent to some equally improper place, to learn that for which they have no natural taste; but instead, do acquire notions that turn their heads all topsey-turvey, into exalted fancies which they can never realize, and from thence graduate into professional offices, town trade, California, or to the ———, a nameless gentleman, where, in vulgar parlance, many an otherwise clever boy, brings up at last. No, no, NO, as Mr. DANIEL WEBSTER says; that is not the *right* way. "But the world is progressing," says the kind, misjudging parent. So it is, in steam-engines, railways, telegraph-wires, all sorts of domestic extravagance, and French revolutions. But in the way of mind, and attention to the homely, agreeable duties of life, I incline to the opinions of an old fashioned author, not much consulted in these *progressive* days. I fear that "there is nothing new under the sun." I cannot now go into this subject as I would; but to my thinking, they manage these things much better at the south, and west, than they do at the north. There, Planters and Farmers are not ashamed of their profession. Here, cultivators of the soil *are*. If we are not thus ashamed, why not bring up our children to an honest, manly appreciation of our own calling, instead of encouraging them to sneak away into everything else, reputable or not, so long as they can make money by it, and thus shirk honest labor, and the true dignity of agricultural life?

Do, my kind, rural friends, read this chapter once a month for the coming year, and practice upon its teachings. Your children will forever thank you for it, notwithstanding a little domestic rebellion in the outset.

The True Soldat Laboureur Pear.—Why is it that so many foreign pears come to us under wrong names? Great confusion has been caused among our Pomologists in this way.

Mr. OLMSTED appears to have got hold of a good fruit, and I hope we shall hear from it hereafter. A single bearing, however, is not always a correct test. He is considerate enough to tell us the soil on which it grows, which is always important, to enable us to judge of the quality of a fruit. A deep, clayey loam is the only soil on which accurately

to test the pear. This, with enough of lime, ashes, and the phosphates in it—artificially applied, if these ingredients are naturally lacking, or have been exhausted—will show us what the fruit really is.

The Color of Buildings in Rural Scenery.—Mr. COOPER, in his foreign travel, if not in his home education, had an opportunity to cultivate a high and a correct taste in what constitutes propriety and truth of color in rural buildings. All who have sojourned in, or passed through the charming and picturesque village of Cooperstown, at the foot of Otsego lake, must have admired the fine baronial style of his dwelling, and its broad lawn of deciduous and evergreen trees and shrubbery—the fit repose of a ripe scholar, and an accomplished man. The mature taste of one who has fixed his home in the midst of such striking scenery, and whose life, for thirty years, had been in perpetual communion with its most attractive objects, is well worth the heed of all builders, and dwellers in the country. The judgment, and the taste of our people, is fast improving in the color of their buildings, although broad mistakes are now and then made in escaping from the old fashioned white, into some of the new-fangled colors which we see mis-applied to newly got-up houses. Observation and experience will correct this; and we shall, it is hoped, work down into appropriate tones of color and shade for our buildings.

The California Grape.—We must see about this. There are, no doubt, good native grapes in California; and when other subjects than gold seeking, and speculation, creep into the brains of her people, I have little doubt that the soil and climate of that wide belt of Pacific territory, will yield us both grapes and wine, of a character not yet produced in the Ohio valleys, and perhaps of equal quality and like flavor to the best of European wines.

It is nowise certain, however, that any grape from California will prove the same identical fruit, if transplanted here, and subjected to the influences of our widely different climate and soils. An indigenous production of any kind, of good quality in its native soil, and matured under the influences of its own sun and air, will not always develop its fine peculiar qualities in other soils, and under sunshine less propitious. We witness that in many familiar fruits in our own localities, but a short distance apart, and in nothing more striking than in the European grapes subjected to out-door culture here. Still, I would not discourage the transfer of a really good grape from California into our soils. Something good may come out of it; and when the thing can be so cheaply tried, it would be a matter of public interest that it should be done in a *thorough* way.

Notes on Evergreen Trees.—Most comforting words to the nurserymen!—"the most hardy, the most beautiful, and the most rapid growing of them all!"—the evergreens. Pretty high praise that, Mr. DOWNING. My good old father used to say just so, when I was a boy, about the Lombardy Poplars. Yet folks don't think so now. It may be all true, however, about the Deodar; and if it shall so prove, it will be perfectly magnificent—for to excel our pines and hemlocks, in their stately and majestic growth in the open lands, will be both a *lofty* and a *spreading* merit in its character. Let us have a Deodar Cedar thirty feet high, and then we'll look at it, and pass a judgment upon its excellence.

A saving clause, however, guards your eulogium—"the most popular of all the *new* evergreens yet *proved* in *this* country." Good. My dear sir, the Pines, the Hemlocks, the Firs and the Spruces, of North America, are unrivalled in breadth and grandeur, by any evergreens in the whole universe.

—"The *piety* top of Ida,"

of which THOMPSON sung in his gorgeous Summer tale of Damon and Musidora, would shrink into insignificance by the side of many of our pine-capped American hills. You do

well to praise the Pines and Hemlocks; and our country dwellers—on propitious soils—will do equally well to plant, and train them to the finest development of their luxuriance and beauty.

A new Strawberry from the South.—New-Orleans is a good ways off, and this is a pretty big story, Mr. PARDEE. "Six months" of steady bearing is great work for a strawberry. I don't doubt it, however; I don't doubt anything in the strawberry line—till I see it. When your strawberry gets well into bearing, my good sir, just send me word, and I'll take a morning run up to Palmyra, and look at it.

On the Prices at our Horticultural Shows.—Your "Working Gardener" talks both sensibly and practically on the subject. Frequent and manifest injustice is practiced by the "judges," or viewing committees, at all our exhibitions, both horticultural and agricultural. One difficulty, I imagine, arises from the want of a standard by which to judge of the just properties of the thing in competition, which is the fault of the managers of the concern—yet not always their fault, for they do often try to establish that standard. But the main difficulty is, in obtaining *disinterested* and *competent* judges of the article under examination. And this, in the *present* low state of the requisite judgment in such matters, in this country, is hard to be corrected. We are improving somewhat in this particular, but it is a most difficult thing, now, to select competent judges, as those who are at all experienced in these exhibitions, are aware. When we shall have *educated* a sufficient number of our people to understand what the proper qualities and characteristics of the articles which come under their review should be, then we shall have something like truth and justice in their awards;—but not till then. True, there are many such in attendance upon our exhibitions; but they are usually professional men, who are either competitors, or if not so, are directly or remotely interested in the success of certain things exhibited, and thus are disqualified in the minds of more or less of the competitors, from passing an opinion.

The proper individuals to settle all such questions, are amateurs, who possess sufficient knowledge and taste in the various subjects of display, to decide upon correct principles. Their position and judgment would then give to their decisions an authority quite satisfactory to all fair competitors.

A Chapter on Dogs.—I haven't been "Coon hunting" for many years. I never follow the hounds after fox or deer—the only *trailing* game we have in this country, save now and then a wolf or bear, in the new settlements. Neither do I go out shooting, except to exercise my old fowling piece at a henhawk, or that viler brute, the carrion crow. I love dogs, however, and always keep a useful one of true breed, by me. The common curs that are kept in such quantities in every straggling village, and on many of our farms, are a standing nuisance, which ought to be abated. But it won't be, so long as there are neighbor's sheep to kill, and pigs to run at large, where a dog fence is necessary.

Landscape Gardening in New-England.—Mr. JAUQUES is a bold man, and talks to the point. Our Yankee friends are getting on however. There have been great improvements in lawn-dressing in New-England, within twenty years past. But they know, practically, nothing of parks, nor will they, until they give up that universal habit they have, of squatting themselves right on to the highway, as if no one could be content without knowing who passed his door every hour of the day. Mr. JAUQUES can discourse further on this subject, with profit to all who have to do with ornamental grounds.

Heat and Ventilation of Houses.—This subject will bear a good, sound chapter in your pages, as often as once a quarter, at least, to the great edification of your readers. I went into a country church, the other day, at the afternoon service, and I was almost stifled with

the offensive atmosphere which the morning congregation had left in it. There was a stove-heat and no ventilation; and the sexton did'n't know enough to let down the top sash of a gallery window on each side, to let out the pestilent stuff between services. On no one subject can the "schoolmaster" start out on his travels, to more advantage than this.

Artificial Feeding of Fish.—It is a matter of surprise that our country residents pay so little attention to the cultivation of fish, in a thousand places where they might conduct their fine little hill-brooks and springs into beautiful ponds, which would cost next to nothing in their construction. Not to speak of the profit, or the convenience of having a fine mess of fish now and then for the table, the amusement of breeding and tending the fish, would be ample compensation for the trouble. It is not a difficult thing at all. Trout, to be sure, cannot be bred in every stream, particularly in limestone waters. But perch can be bred everywhere, and they are a beautiful docile fish, and fine for the table. Boys, and girls, and "old folks," can attend to this,—the first to keep them out of mischief, and the others for amusement. Actual labor, there is little of, in connection with it. Fish breeding is one of the round of interesting objects that make up the variety in home attractions in the country; and wherever the water can be commanded, a fish pond should as much be one of the appurtenances of a country-house, as the chicken-coop, or the pig-stye.

A Country School-house.—A very neat design—picturesque, cheap, and tasteful. This model cannot be too extensively practiced upon. What a beautiful array of station-bouses, something in this style, the Harlem and some other of our railroads, have along their lines. If people only knew how much the style of their school-houses, and other buildings of a public character, have to do with the pleasure they give to those who look upon them, and the improvement they add to the places they occupy, they certainly would study to put up better ones, architecturally, than they do.

Agricultural Education.—We believe the Editors of the Evening Post belong to that class of politicians who imagine that government has nothing to do but collect taxes and pay its own salaries, and let the people take care of themselves. Very well. Then sponge out at one sweeping dash, all government connection with, or care of, all institutes and seminaries of learning of every kind, whatever, and let those who want them, get them up, as these editors think the farmers can get up agricultural schools—*on their own hook*. We don't object to that, provided all interests shall be served alike. One would suppose that men as observant of our institutions as the Editors of the Post, would know that no such political teachings as are practiced in the Prussian Agricultural Schools, *could* be taught in the schools of this country, under any circumstances. It is just such stuff as this that pervades the minds of many of the farmers themselves, and has prevented our having, years ago, at least *one* leading agricultural school in this boasted "Empire" State of New-York. Every winter, for years past, a proposition has been introduced into our legislature to create an institution of this kind; and at once, a majority of the farmer members, like the old rat in the fable, discover "a cat in the white heap yonder." Thus, year after year, our great agricultural interest is cheated by its own guardians, out of its equal share in the common property of the state, for its own improvement. When we see anything better, it will be, probably, when a new generation of farmer legislators rise up, who, knowing what their true interests are, will have the courage to serve them. The measure could now, in three weeks time, be accomplished, if our farmers in the legislature would only say the word. But they prefer lending their aid to the "soulless corporations" of the non-producers, to doing anything for the benefit of the wide-spread, and long-neglected class to which they, themselves, belong.

A truer thing never was said than by yourself, Mr. Editor, in this very article; that "*farming is either an intelligent occupation, and demands education, or it is not, and demands only brute force.*" Our legislators hold to the latter; and so long as they practice on that opinion, we may knock at their doors till doomsday, with our petitions, before we can get a successful hearing. But let a body of men go at the work with the same energy and determination of purpose, *and the same appliances* that others do, when they want to get a legislative enactment for *private* benefit, and the work would be accomplished "in a jiffey."

JEFFREYS.

NOTES ON PEAR BLIGHT IN ILLINOIS.

BY PROFESSOR TURNER, JACKSONVILLE, ILL.

THE principal horticultural event worthy of notice last season, in these parts, was the great and unparalleled blight and failure of all sorts of fruit.

The spring frosts killed the plums, peaches, and apples, and as there was no food for the *Curculio* and kindred vermin last season, we may expect that a great variety of specific preventives for their ravages, will succeed to perfection—for an enemy already starved and annihilated is often easily conquered.

We will therefore leave these specifics and all further experiments, and eat our plums till the "Grand Turk" has time to multiply or emigrate for another crusade upon us—and also learn that Providence is wise—and that frosts that kill *all the fruit*, are sometimes most excellent and necessary things; worth more for the "Turk" than worlds of pigs, chickens, sulphur, salt, &c. &c. Both the blight and grape rot are different matters, from which as yet we see no relief.

The season till September was remarkably wet, and all the grapes were smitten with the rot sometime in July—it was an entire destruction, and no remedy seemed to do the least good—while the true philosophy of the matter seems to be more of a mystery than ever. No position or training, or pruning, or picking, or artificial soil, or subsoil, or drainage, seemed to be of the least avail—while some facts seem strongly to indicate that the real cause must be either fungus or animalculæ.

I shall, this spring, enter upon a new course of experiments as regards the grape rot, by planting vines in brick and cemented vine pits or vats, filled with different artificial soils and subsoils, of which in due time you shall hear. My Catawba vine was the only one that escaped a total rotting and loss of fruit for two past years.

As to the pear and apple and quince blight, it swept every thing last season in these parts. It entirely destroyed every privet bush and hedge on my grounds, and attacked the pears and quinces with unparalleled vehemence. The apple trees seem to have an innate power of resistance, (or a *vix medicatrix*,) which the pears, quinces, and privets have not.

I devoted much time to the phenomena, and examined carefully all the pear trees in town, and I think the following facts quite well established with us:

I. There are some six forms of blight, not one alone, if we may believe what appears to be well authenticated by credible witnesses, and they all appeared among us the last season:

1. There is an insect which eats into the terminal bud, and down the pith to a considerable distance, and causes a *terminal blight* in the apple tree. This is not serious, and has been found on no other tree here.

2. There is a sort of locust that stings the branch, and causes a similar phenomenon sometimes.

3. There is an insect that eats into the roots of any of the tender buds on the terminal branches, and sometimes causes them to break, or blight and wither.

4. There is an insect, probably the *Scolytus pyri*, that eats a ring around the terminal branches, and causes their death above, on the apple, and sometimes runs down on the pear, and apparently causes the death below the part injured.

5. There is a blight on the pear, beginning on the parts exposed to the hot sun, and before this characterised as the *sun-blight*, sometimes also affecting a *newly trimmed* apple tree

6. But there is also a worse form of blight than all these combined, which developed here in the most fearful ravages of the pear tree, quince, and privet bush, last season, and in some cases, affected the apple also. It is the real "Asiatic cholera" of pear trees; and I believe has never before spread among us in this county till last season. We suppose that we *know, now*, what you and your correspondents really mean by "*pear blight*," when you speak in your saddest and most despairing tones—and we have never fully known before. But lest it should still be different from your forms of blight, I will try to describe it; for it is evidently very different from all the forms of blight mentioned above, in its origin and effects, and coincides only in the single fact, that the terminal branches appear to the careless observer, (but to no others,) to be first affected—just as in the other cases.

This form of blight differs from all the forms produced by insects above described, in the fact that it always *begins* in the trunk and larger branches, and never in the small shoots of the tree: and it differs from what I described as the "*sun-blight*," in a former number of the Horticulturist, (Sept. 1849,) in the fact that the poisonous blotch on the limbs or trunk, is as likely to appear in cool, as in extremely hot weather; and as often found where the sun never shines, as beneath the full stroke of its rays.

Indeed, I am inclined to think it is the natural sequel, or terminatori, of that singular leaf blight which I described in the same article, of Sept. 1849.

The first *fatal* symptom that strikes the eye, as in the other cases of blight above named, is the blackening and perishing of the terminal leaves and branches. But by a careful microscopic examination, a dead and putrid blotch, or spot of bark, will *always*, (in this form of blight,) be found on the neck, trunk, or branches, of the tree below, which has thrown its poison first upward, and killed the tender terminal shoots, and then it again passes downward, and never stops till all the tissues are killed, at least down to the original plague spot.

This spot is most likely to be found at those points where the *bark is changing from smooth to rough*—either at the collar near the ground, or in or near the crotches and bifurcations of limbs and shoots. This, and other facts, induced last July, the suspicion that the cause must be either fungus or animalculæ. And, after examining many hundred pear trees in this town and county, most of which are entirely ruined, I set about endeavoring to ascertain what was the cause.

I first spent a week in a thorough personal examination of my trees, root and top, with spade, knife, and microscope, at hand. I found nothing, save that the seat, or *apparent* origin of the disease, was as indicated above, and a confirmed belief that it was the work of fungus, or extremely minute animalculæ, invisible with a common microscope. I accordingly procured a solar microscope of great power, belonging to the college apparatus, and in presence of Professors ADAMS and BATEMAN, cut a small bit of bark where I suspected the insects were, (if anywhere,) and placed it in the focus of the microscope. We

all repeatedly saw an animalculæ, which, under the great power of the glass, much resembled, in color and shape, the common "sow-bug," (as it is called,) running among the fibres of the bark, with about the same ease and freedom that a pig would run in a thicket. But we could none of us decide whether this animalculæ was a *cause*, or only a *consequence* of the disease—as multitudes of coarser insects will always be found around dead bark—evidently only because it is dead—and *therefore* gives them a proper nidus.

I made however, on this hint, a strong wash of soap suds and tobacco water, scraped all the trees thoroughly root and branch, and washed them all over, removing and burning every dead piece of limb or bark. I also threw about one peck of coal ashes from a steam mill around the trunk of each tree. I was then obliged to leave for several weeks for the east.

On my return I was rejoiced to see all my pear trees greatly improved in health and general appearance. But whether the effect was to be ascribed to the changes in season, or to the treatment, or both, I cannot say as yet.

I shall continue my experiments next season, with some hope of ascertaining the presence of Fungus or animalculæ, and a remedy for the same, if they exist, and hope others will do the same; and to prompt this research or inquiry is the sole object of this present paper.

Meantime I think the following points established:

1. It is certain that this form of blight differs from all others mentioned above, and from all other forms we have ever before had in this place.

2. It is certain that it begins its final destruction on the outer bark of the larger limbs, by a peculiar, though at first invisible poisonous blotch, which first throws up a poison, or something analagous to it, that kills the terminal shoot—while many feet of perfectly sound wood, bark, and leaves, may lie between the dead top and fatal spot, until at last the return current of sap kills all down to this blotch, and often below.

3. If this blotch is found, and all the dead parts thoroughly removed, especially if washed in spirits turpentine and lamp black, carefully, the limb above may be saved without amputation, but if any dead or poisonous bark is left, it will generally keep spreading from year to year, till all is dead.

4. It is probable that the disease really begins *near the ground in the neck of the tree* or its roots, and that the blotches in the crotches and rough places of bark above noted, are merely a *secondary* symptom of the disease, though they always *precede* the dying of the twigs.

5. It is probable that the black specks on the leaves in fall, and the red carbuncled spots on the bursting buds and younger leaves in spring and summer, are also premonitory symptoms of the same dreadful disease, which takes several years to run its full course.

All spots on the leaves and branches being an effort of the tree to throw off the annually accumulating disease, and the deadly blotches in the crotches and consequent dying of branches, only the fatal catastrophe of the previous course.

I ought more properly to ask if these things are not so. Let our friends this spring scrape away the dirt and carefully examine the condition of the necks of their pear trees under ground, and see if they do not find indications of a scurvy, rusty, disense; then let them examine all the bark above, especially all rough places, and see if the dead bark is peeling off and growing healthy as it ought to do, or cleaving down and turning red and black.

Then let them notice the condition of the blotches on the leaves in summer—of the buds in spring—and see if they do not find all this followed sooner or later, with sudden death

of tops and branches, or perhaps the whole tree at some future year, soon after the commencement of the second growth in summer—in this way we shall sometime be likely, among us, to find out the truth of the nature and causes of some, or all of these various forms of blight, which I am sure we never shall do so long as we are content only to consider “a blight, a blight,” and let it all go at that. I think there are some reasons for suspecting that the blight of the quince, pear, and privet, in this form, and the rot in the grape, and the rust in wheat are of kindred nature and origin—and if we can discover their nature and laws in either case, it will be productive of immense good. Let us all try.

Yours truly,

J. B. TURNER.

Illinois College, Feb., 1852.

PRACTICAL HINTS ON THE CULTURE OF GOOSEBERRIES.

BY J. C. THOMPSON, STATEN-ISLAND, N. Y.

As you invite “practical communications from your practical readers,” I offer for your consideration and disposal, the following article, believing the account of my successful method of cultivating gooseberries, will be instructive to your numerous readers.

About thirteen years ago, I obtained a small stock of gooseberry cuttings of the white variety, and have continued to grow the same, and in fact have some of the original stocks now in good condition among my bearing bushes, which number over two hundred, yielding between thirty and forty bushels annually, of fine and perfect fruit, which I readily sell at from two to three dollars per bushel.

I always begin my gardening operations as early as the ground can be worked. I therefore soon discovered that those that stood in the part of the garden which was first dug up, and the manure worked in well about them, were free from blight or mildew, and the crop fine in size and flavor; bushes vigorous; foliage heavy, and very dark green.

The strongest proof I had of the advantage of good treatment, I will state: an isolated bush in the door-yard, was left to take care of itself. The result was a very fine crop of well mildewed fruit. The other case was, where some half dozen bushes stood in front of the bee-house, and as it was difficult to trim them, and manure and work the ground around them, the fruit was worthless—being covered with a heavy coat of black rust, or mildew. These I dug up; separated; trimmed off the tops to a mere stump; planted them out, and treated them in the same kind way that I did the others. The result is, that they are now the finest bushes; bear as many berries as any in the garden, and never show the least sign of mildew.

Treatment.—All my bushes are trained on a stem six or eight inches from the ground, before they branch off, and trimmed so they have a uniform shape. The trimming should be performed in February, or as early in March as possible—the gooseberry being among the first that shows the approach of spring, so it is the first that needs attention. In trimming, when I wish to renew a bush, or any portion of it, I cut back to a good bud near the main stem, to obtain a good growth of wood for future bearing, and then cut off from a third to a half of the last years’ growth, of every twig or shoot on the bush.

The trimming completed—the roots are carefully uncovered, and two or three shovelfull of manure are worked in about the roots, with a fork, being careful to injure them as little as possible; this finished, the earth to be replaced.

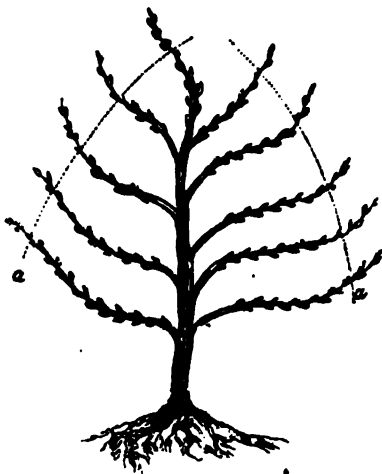
I have all my garden trenched every season before planting, and as the diggers approach the bushes, and uncover the deeper roots, they apply some manure to them also.

That some varieties are more disposed to mildew than others I have good reason to believe. I purchased a few bushes in market, represented as being "extra fine," but I found with the same treatment as the others they showed a slight disposition to mildew.

That the mildew is contagious, I do not question. Having put a lot of cuttings on the shady side and extreme edge of the garden, for the purpose of rooting, they were left to take care of themselves, being neither trimmed, manured, or the least attention paid to them. Early last May the leaves became very much mildewed, and I soon found that the fruit on them, and a row of bearing bushes which were six feet distant, and ran parallel with the row of cuttings, was affected just as far as the mildewed cuttings extended, while all the others were free from blight of any kind.

The operation of shortening the twigs, is to increase the growth of the new wood and reduce the quantity of fruit, so that the bush can perfect what it bears, and furnish new and vigorous shoots, which are indispensable in order to secure a future crop.

I have lately adopted the following plan: trench the ground two feet deep; manure and mix thoroughly; set out two feet apart well rooted plants one year old, trimmed to a straight stem twelve or fifteen inches long; take off all the lower buds, six or eight inches from the ground; permit them to grow at random the first year, (putting down a slight stake to steady each.) Last autumn they appeared as No. 1. This winter I clipped off from a third to a half of last year's growth, (as at *a* on branches of No. 1,) giving the bush a good shape. The next was cut back to one or two good buds close to the main stem, and appears when trimmed as No. 2. The next is trimmed as No. 1 and so alternately.



No. 1

The advantage of this method is simplicity—takes up little space, ensures new wood with large thorns, which always produce the best fruit. The trimming is performed with ease and rapidity, affording the bearing bush ample space, light, and air, while perfecting the fruit, by which time No. 2 will have filled up the open space. The winter following, No. 1 is cut back, and appears as No. 2, while No. 2 will take the appearance of No. 1.

My experience, after thirteen years successful cultivation and observation on the habits and wants of the gooseberry, fully satisfies me that the latter plan faithfully carried out, will ensure a fine crop with little trouble, as well as adding beauty and uniformity to a bush, that is too apt to be neglected, and makes a hideous appearance in our gardens. The person from whom I obtained my stock (then very good) has since for want of attention permitted his to run down, so that they are far below mine in size; while mine have been improving, and last summer when offered at our horticultural exhibition were awarded the first premium. [Thanks for this sensible and practical communication. Ed.]

Yours truly, &c.

J. C. THOMPSON.

Tompkinsville, Staten Island, N. Y., Feb. 20, 1892.



No. 2

FURTHER NOTES ON COUNTRY SEATS NEAR BOSTON.

BY HORTICOLA.

ROSE HILL, the residence of THOMAS PAGE, Esq., near Waltham, a pretty country residence fast rising into repute in the horticultural world, and named in honor of the proprietor's favorite flower, which he cultivates largely and successfully, sparing no expense to obtain all the varieties worthy of cultivation. This place is situated on a gentle eminence, and commands a beautiful prospect of the picturesque scenery for many miles around. This part of the country is beautifully varied with wood and water, and admirably adapted for villas and villa gardens, and it is rather surprising that the vicinage of this pretty suburb is not more employed for that purpose by the wealthy Bostonians.

The mansion of Mr. PAGE is a neat and commodious structure with much interior comfort and convenience, but it has one radical fault. It is too little and too low for such a commanding site, while the offices and outbuildings adjoining are too conspicuous. This is a very prevalent defect about the Bostonian suburban villas, and nothing is more common than to see pretty Tuscan, or Gothic, or Italian villas, with a barn standing alongside, of four times its size, out of all character and proportion. Mr. PAGE is fully aware of this fault, and contemplates a thorough alteration, by which this feature will be entirely done away with. Much has already been done on this bleak hill to change its original aspect, and when all the improvements now in contemplation are completed, this will be one of the prettiest suburban villa residences in the whole neighborhood of Boston.

Among the recent improvements at Rose Hill, is the erection of a handsome green-house, with a wing attached for the purpose of growing roses alone. This is one of the prettiest green-houses about Boston; it is roomy and commodious, and we were informed by Mr. PAGE, it is admirably adapted to the cultivation of plants. It is heated by hot water pipes, and this winter has thoroughly tested their capacity of keeping Jack Frost at a respectful distance. This house is now quite filled with a choice collection of all the different varieties of green-house plants, including a choice collection of Camellias. We observed some fine large Azaleas in full flower, as well as Acacias also flowering splendidly. The collections of Geranium, Cineraria, Calceolaria, Primula, &c., were very fine, and some specimens exhibiting very superior skill in their cultivation. The other house was filled chiefly with roses, in good condition, though rather backward, and not producing so many blooms as we would like, but those produced were truly superb—especially the hybrid perpetuals, which Mr. PAGE grows largely in pots; among the rest Mr. P. showed us *Fortune's five-colored* rose, which, from the specimen there presented in full flower, we are very much inclined to pronounce a complete humbug. The bud in embryo is just like a monstrosity very common in the rose family, and when fully expanded, is little else than a cluster of half developed leaves struggling for light. This is like many other much talked of floricultural and horticultural importations, which come across the channel with high sounding names, and nothing else.

The residence of G. C. LYMAN, Esq. This is a place of considerable note, and has in its grounds many of the elements of a fine place, such as abundance of wood and water, and a surface varied by undulations, with a river running through the grounds. The mansion is apparently a series of after thoughts, and revised additions, possessing no pretension to architectural taste or beauty, and seems to have been built, like many old fashioned houses—bit by bit—as the family required them. It stands, compared with the surrounding grounds, exceedingly low, without any prospect from itself, save of the villa

residence of Rose Hill, and some others, that appear to look down upon it somewhat contemptuously. It is, nevertheless, snugly nestled among fine trees, and possesses a fine lawn—or rather park—somewhat in the English style, extending along its front, but rather meagerly, and we should think very injudiciously planted, except round the outer edge, in the form of hedge rows, a system of planting very extensively carried out by the late Mr. LYMAN, which has added much to the comfort and beauty of the highways connected with, and surrounding the whole of this fine estate.

There is a good range of vineries. The grapevines, however, are indifferently managed. We must repress the reflections which arose out of the contemplation of this specimen of gardening, and suspend our judgment on what we cannot speak with freedom, without doing an injury to the feelings of the party who is, perhaps, unavoidably censurable.

We had heard a good deal of this place, and though a great deal had been done by the late proprietor, in the way of planting, we turned a way from it with a feeling of disappointment. Much, we say, has been done—but how, and why, we could not tell. The arrangement of the place exhibited a lamentable jumbling of crotchety notions, carried out in the most ludicrous possible manner. When the late Duke of Northumberland asked the celebrated BROWN, on what principle he planted trees, his answer was—"I stick them in here and there, as the fly bites," and on this famous principle has this place apparently been planted.

The orchards occupy the rising ground in the rear, and include some ancient pomological patriarchs, borne down with age. We have seen few places where art has done so little for nature, and nature done so much for art, and where both so violently antagonise each other. One glorious object we cannot overlook—and that is the old Purple Beech, the oldest and largest, we believe in the country; it is truly a noble tree. Another feature observable in the neighborhood of this place, is the fine avenues of forest trees planted by the late proprietor, along the roadsides; these extend for miles, around the whole estate, and are now large and lofty trees, uniting their boughs to form an umbrageous canopy overhead, and for which the late venerable proprietor deserves the gratitude of future generations.

The residence of GEORGE LELLAND, Esq., Waltham. This is another of those pretty villa residences that have sprung up within the last few years, giving a character to this interesting neighborhood. The grounds are of limited extent, but the green-house and shrubbery contain some objects of rarity and interest, which give the place a more interesting character than it would otherwise possess.

Considering all the bearings of this place, we think the hot-houses and green-house, most unfortunately situated. Built on the side of a deep bank, with the back running within a few rods of, and parallel to, the main front of the mansion, the back walls and chimneys present a very ungardenesque appearance from the piazza of the house. 'Tis not very uncommon to see persons making such a hobby-horse of one stereotyped idea, that they entirely destroy every other therewith connected. The hot-houses at this pretty place, are a standing manifestation of this fact; not from any fault in the worthy proprietor, who has spared no expense in their construction, but from a cause which has been also the bane of hundreds of others besides.

The range consists of two graperies, with a green-house between them, spanned on the projecting ridge and furrow plan. The former are good houses for growing grapes, and most elegantly finished and fitted up. The green-house in the center is, I believe, a counterpart, if not an exact copy, of the one at Mr. BIGELOW'S, noticed in my last. It is approached from the house by a spiral stair-way, which descends from the ground level be-

hind, and enters the green-house through a door in the back wall; a most awkward and unhandsome arrangement, to say the least of it. In fact, this plant-house is more out of place than any structure of a similar kind I ever beheld. But it stands under the lee of a deep terrace, and that consideration was apparently sufficient to counterbalance all others; at least all others have been made subservient to it, although finer sites than is presented by other parts of the ground, could scarcely be found. We believe Mr. LELLAND contemplates an addition to his plant-house this season, which is not yet begun; and were it not for the fine orange and lemon trees now crowded together, we would be tempted to wish that it never would. It is seldom that the plan or appearance of a structure of this character, can be improved by alteration or enlargement, and unsuccessful attempts generally leave the building worse than at first. Besides, it would hardly be advisable to make the conservatory project farther on the vineries than it does at present, and the same money which would be required to make this house what its proprietor wishes, would build a better structure from the foundation, and upon a far better site.

The orange and lemon trees alluded to are indeed splendid—we thought the finest trees we had ever seen, and the fruits too were splendid. Even in our comparatively tropical southern states where the orange grows with far more luxuriance than in our green-houses here, the fruit for size, richness, and abundance, could not be surpassed. We felt sorry to see them so much crowded for want of room to extend their branches, but notwithstanding their crowded condition, they were in vigorous health. The house contained many other good plants, and had the beautiful Wistaria, in full bloom, trained on a trellis under the roof; though hardly in its proper place, is nevertheless a beautiful object, and forms an agreeable contrast to the dark green foliage of the plants beneath.

The vines here are vines in good earnest—we never saw such young wood as they made last year—the canes nearly an inch in diameter. In one house the vines were just commencing their growth, which contained also a fine lot of peaches in pots. Why is this plan of producing early peaches not more extensively adopted? Fine early crops can be produced, and with very little trouble or expense, and lucky are they who this winter have peaches under glass, for there will be very few out of doors; indeed none at all about here. There is not a single peach tree in my garden, rather sheltered too, that has a young shoot alive. How fares it with them on the Hudson, and in the peach orchards of New Jersey?*

There are many other objects of interest about here that I would mention, but I shall throw aside my pen till another time. Yours truly, HORTICOLA.

THE HYDRAULIC RAM.

BY T. W. LUDLOW, JR., YONKERS, N. Y.

THIS little machine, one of the most useful inventions of the age, gives to every farmer the use of water raised by it to a higher level, and at about the same expense for the same distance, as it formerly cost to bring water in pipes, from a height above the point to which he wished to carry it. With a small stream from a spring, at a descent of a few feet, you can now force, say one seventh of the water, to any part of the farm, and raise it ten feet for every foot you have of descent or power. If properly put up, according to the location, and well protected from frost and the sediment of water, the Ram will run a year—when it ought to be taken down, cleaned and painted, and new leathers and washers put

* On the Hudson only the blossom buds injured—and on the hill-tops these have escaped. Ed.

in. In November, 1850, I planned and put up for a gentleman in Westchester county, an Hydraulic Ram, bringing the water from a small brook fed by a spring, 600 feet, to the house, with a rise of fifty feet to the second story. By a dam four feet high, I obtained six feet descent from the surface of the pond, to a small well of seven feet deep, in which the Ram is placed to guard it from frost.

I consider it important to place the driving pipe about a foot below the surface of the pond, so that if the pond settles down in the dry season, the Ram may be supplied with water. By doing so in this case, the Ram continued to work during the whole of the extraordinary drouth of last summer, the water at one time sinking in the pond to within an inch of the driving pipe. This was one and a half inches in diameter, and with a No. 5 Ram, supplies the house with sixteen hogheads a day.

The reason, however, for my troubling you with this communication, is this. From the bottom of the well where the Ram is placed, I laid a two inch glass pipe to convey the waste water to the brook; and being short of this pipe, I continued it with a six inch brick drain, about 30 feet, to the brook. Last week the well filled with water, and the Ram stopped, and as the proprietor had not cleaned the Ram and supplied it with new leathers, after running fifteen months, it was supposed that something was the matter with the Ram; but on examining the brick part of the drain pipe, I found that although laid in mortar, it was entirely filled with the roots of trees, choking it up in this short period so as to prevent the passage of the water, and thereby filling the well above the Ram, preventing its action. I think it may be useful to draw the attention of your correspondents to this, as it will be better to use glass, or other drain pipes impervious to fibrous roots, especially near streams where so many exist.

Now you will perceive from this statement, that those roots must have continued to grow and fill up the drain in this last severe winter, for the ram worked the whole winter through without stopping, and it was only the beginning of this month that the drain, from being entirely closed up with roots, prevented the working of the ram.

Can you give any information on this point. If roots grow below frost in winter, it would be an additional reason for transplanting in the autumn.

Yours,

T. W. LUDLOW, JR.

Yonkers, N. Y., March 9, 1852.

The roots of many trees have such an affinity for running water, or rather the elements of food which that water contains, that they will penetrate drains of ordinary masonry, and, little by little, choke them up entirely, as we have twice observed, and as our correspondent's illustration clearly proves. It is also well known to physiologists that a gradual growth is always going on in the roots whenever the ground is not actually frozen.

Undoubtedly, on this account, in all parts of the country, where the ground rarely freezes more than a few inches, it is greatly advantageous to transplant in the autumn. But, on the other hand, in extreme northern countries many trees suffer, during the succeeding winter, if planted in the autumn, from the effect of the severe cold on the branches; much more than if planted in the spring; and, as is abundantly proved, a transplanted tree is much more susceptible to cold than one well established, with its roots deep in the soil. So much is this the case that it is the opinion of some writers that a higher temperature is maintained in the trunk and branches of a tree, by mere ordinary conducting power, during severe cold, in proportion to the depth to which the roots extend—since the lower the less liable to be frozen. Hence too, the great advantage of covering the soil over the roots of comparatively tender trees, with a mulching of saw-dust, tan-bark, or any other good non-conductor—to keep the frost out.

The hydraulic ram is of incalculable value in all places where a constant small rivulet of water can be commanded—and we notice that in some parts of the country the farmers use it for supplying their cattle-yards instead of digging wells. Ed.

CRITIQUE ON THE FEBRUARY HORTICULTURIST.

BY JEFFREYS.

Citizens retiring into the Country.—You probably recollect the story in "Salmagundi," told by the meditative LAUNCELOT LANGSTAFF, of his "Uncle John," when on a visit to him, then in his country retirement, enjoying a cheerful and merry old age; and how the old gentleman related to his nephew, with all the vivacious garrulity of a boy, what improvements he had made, and what more he was going to make; and how, a few months after, our narrator was sorely shocked at the news of his uncle's death, just as he had worked down comfortably into a bed of rocks, where he was blowing out a fish-pond!

I fear the example of "Uncle John," is too often followed now-a-days, for either the enjoyment or the profit of many "retired citizens." If a great many people who determine to retire to country residences, after making their fortunes in codfish and candles, or other honest and praiseworthy vocations, equally distinct from the cultivation of a taste of what truly belongs to an *American* country place, would first employ some honest man of capacity in such matters, to fit them up a place by *contract*, it would save many a dollar to their pockets, and a world of groaning over their folly, when they had cooled down from the excitement of over-looking the outlay of their money. The difficulty is, that every man who knows, experimentally, nothing about it, thinks he *knows it all*, and can get up just as good a place on a bleak side hill, or on a leaching gravelly piece of plain, as another one has done, who has availed himself of a century of nature's industry, in strewing her trees over a beautiful undulating surface, and only combed her out, and thrown her tortuous twistings into agreeable shape. But I am satisfied there is no help for it. Ostentation in expenditure has as much to do with the absurdities of getting up country places, as the desire to provide an agreeable residence. How would their rustic neighbors know they had money, unless they saw them spend it?

Nine men in every ten, who get up a country place themselves, get tired of, and abandon it, in less than ten years after it is completed—or more frequently in half the time. The *philosophy* of country life they never studied when young, or while toiling in the every-day excitement of business, in accumulating their estates; and when they think they want to enjoy retirement, are too old to learn it. A man, to enjoy the country in the decline of life, must know the country when young. He must keep up a constant intimacy with it all the while. He must love it too, and appreciate its pleasures. If he cannot do this, better to stay in the city, and only pass out now and then, for a jaunt to Saratoga, Newport, or Niagara, and spend the rest of his sunshine in his old haunts of the crowded city, and amid the noisome atmosphere of the docks, the sinuosities of the chambers of Nassau-street, or the nicer moral influence of the board of brokers!

To guard trees against Hares and Rabbits.—Hares don't grow in this country, and the boys snare all the rabbits; so we have nothing but the mice to trouble us. And they sometimes annoy us exceedingly. Till the bark of young trees gets so thick and rough that the mice will not touch them, I have found no better way than to keep the ground ploughed, or dug around them, for several feet, and then examine them late in the fall, to

see that no burrowing place is left for them. Hardly an effective composition can be invented, but what will hurt the trees more in its application, than the mice will in gnawing them, or that will not, after a little time, lose its pungency, or its peculiar preventive properties, and the vermin work their destruction in spite of it. A thousand nostrums have been invented for this bark-preservation during winter, but I have found the *spade* better than them all.

The quick-lime, and the water, and the soot, may be tried, however, and if it will do no good against the mice, it will certainly do the tree no harm.

Hints for Country Houses.—I think I could take that old home of SIR WALTER RALEIGH's, and by throwing a long low veranda along the front, and shifting the chimneys into the body of it, make a very respectable affair in the way of a country residence; but I would not *build* such a house to start with.

Your hints, in the way of alteration, are good, and if more people would act upon such hints, in improving substantial bodied old houses, which happen to stand on the places they buy, instead of tearing them away, and building something in their places not half as good, they would do better.

I once knew a company of gentlemen who bought a large farm for the purpose of laying it out into lots of several acres each, for their own residences. On a part of it was an old, substantial, uncouth looking house, that had long been used as a tavern, and as they proposed changing the line of the highway which ran by it, the old tavern was thrown back into the enclosure some distance. It had trees around it, and some capabilities. One of the party chose this and the ground around it for his own, to which the rest, thinking it of no value, consented. He was a man of taste, and went to work, spending not half the money upon it, that the others did in getting up their cellar walls, and made it the most inviting and admired of the whole! Such things may be frequently done, if folks will only think so.

The Curled Leaf on the Peach Tree—An ingenious essay and theory, this of Mr. GOODRICH—and quite observant, at least. All of us, who grow peaches, have had the curled leaf more or less, for the past two years. But I doubt the cause to be what he suggests. Why should the peach trees in Delaware and Ohio, have it at the same time, where the weather was not half so cold as in Western New-York; and not so cold either, as has usually been the case in and about Utica, when no curl took place? The truth is, these *curls*, and other maladies, come and go in all sorts of seasons; we neither know why nor wherefore. Mr. G.'s trees appear to have been more deeply affected than many others. I saw many that were badly curled, which bore good crops of fruit, although the curled leaves fell off, and were replaced with new ones, which fact would contradict a part of the theory in question.

This article is valuable, however, in recording the presence of such a malady; and although we may not see the curl again for years, it may hereafter be referred to with profit in other questions.

Our Improving Agriculture.—There is a freshness and a raciness in Mr. FRENCH, which always makes him a most welcome visitant to your pages. There is, too, a vein of sound practical sense running through his remarks, most edifying to his readers.

The very soul of a periodical like the Horticulturist, next to the labors of an energetic, discriminating editor, is the thoughts of intelligent, practical correspondents upon the legitimate subjects connected with it. There is no better way—none so good, even—to build up a paper and give it character, influence, and usefulness. This correspondence, too, should be wide-spread; it should come from every state and territory in our broad Union.

What a fund of valuable information would it thus throw together—what a fund of instruction would be thus combined, making it a thoroughly national work of reference for all time, in many most interesting subjects! The circle of your correspondence should be greatly enlarged. Distant territories, now scarcely heard of in your pages, should contribute their share of information, and a circle of intelligence would grow out of it, most profitable to your readers in the information it would convey, and delightful in the interest it would impart to those who read simply for pleasure.

Should a Republic encourage the Arts.—No: except the arts of attack and defence, either in billingsgate or boxing—not much matter which, for they are both practiced in Congress, at Washington. "We are a government of the people," and that people *en generis*. When the "freest, the most intelligent, and the most enlightened nation on the earth," are sufficiently cultivated in the arts to know the difference between the designs of a village carpenter, and those of Michael Angelo, their "government" may do something to encourage the arts; and that will require something besides "Art Unions," who spend five shillings for *sack*, to a half-penny for *bread*, after the fashion of Jack Falstaff, to accomplish.

Some years ago I was gazing at GREENOUGH'S statue of WASHINGTON, then in the rotunda at our national capitol. By the way, I never liked either the posture or the drape-ry of that piece of sculpture. The attitude of WASHINGTON should be standing, like his own towering greatness, superior to everything around it. A few feet from me stood that elegant man, and accomplished scholar and statesman, WILLIAM C. PRESTON, of South Carolina. He was looking upon the statue with much interest, and, as I thought, a critical eye. At that moment a couple of the "sovereigns" passed by, one of whom was picking with his fingers, the kernels out of some walnuts which he held in his hand. He had got hold of a hard one, which, after trying with his teeth, still held fast to the "meat." Stopping short against the statue, he exclaimed: "I say Bob—if I had a hammer, I'd crack this nut on that old chap's toes!"

We have been fortunate enough in this country to get some fine specimens of architecture in our government buildings, and many more in our public structures where government had nothing to do with them. So too, in the way of pictures and statuary. Now and then, we have a tolerable public garden, or park, but on a small scale. The effect of these will be to produce better ones. We must get on by degrees; and after a while, and a good while too—we may possibly get up by the side of some lesser things among the *barbarian* Italians, French and Mohammedans. From the constitution of our government, and the operation of our institutions, we can never have in America, that riotous display, or that high cultivation of the arts, which exist in the despotisms abroad. "The greatest good of the greatest number," contrary to that of "the greatest good of the fewest number," as there, is our theory and our practice. Private fortunes in this country are not sufficiently large to indulge in a display of the arts to any extent; nor is it often that the wealth of any one family—even if the successive generations of such family were disposed to indulge in it—sufficiently large to carry forward a work of this kind to completion, with any grandeur of design. Government, of course, will not do it, save in detached parcels for its own use, and those not largely expensive. A despotism, or a monarchy, where the *will* of a single man, or the *combined* will of many, and that will perpetual for the time of a generation, or longer, only can carry out great national works of art.

Another question then comes up; are they, as a whole, beneficial to man? I mean such magnificent conceptions of art, as those of MICHAEL ANGELO, RAFFAELLE, and the great masters of centuries gone by—for in these better days for the people, there exist, confes-

sedly, no such masters. Such works, in the expense they entail in their erection and execution, and in the care and keeping of them afterwards, are incompatible with the freedom and happiness of the people where they exist. We need only name Greece, Rome, Venice, Geneva, France in the time of Louis XIV, to say nothing of ancient Egypt, and the nations contemporary with her power and grandeur.

"While stands the Coliseum, Rome shall stand;"

and so shall stand the tale of her luxury, her wretchedness, her fall, her degradation and misery. The spectacle of her "Dying Gladiator,"

"Butchered to make a Roman holiday,"

and a thousand other atrocities practiced by that highly refined, yet barbarous people, must ever sadden the picture of the arts in Rome. No: better that the arts should creep along in America, under the stinted patronage of the government, or of the few communities of private citizens who can appreciate and afford them; even that JONATHAN, in his hunting-shirt and happiness, should crack his shag-barks on the toes of WASHINGTON, than that we should give up our comforts, our usefulness, our liberty, to that which, with all our efforts, we cannot equal in nations now in their decline, and who send us by way of addition to our strength, save now and then a man of worth, little else than singers, dancers, trinket-venders, shoemakers and beggars.

More about the Sage Grape.—Till I know more about it, I shan't burn my fingers with its meddling. When any body finds a wild Fox grape north of the Potomac, worth introducing into the garden and cultivating, by the side of the Isabella, and the Catawba, and the worth of which is well substantiated by the pomological test of a company of good judges, we'll talk about it.

Selections of best Fruits.—P. P. writes like a man who knows what he is about. There is no greater folly in the world—I know it by experience—than for one to take up a nursery catalogue, and run over the lists of the fruits, marking such as are highly recommended, and thus making his selections for his orchards. Every single variety of fruit that he marks may be all that is said of it, in *certain* places—but not *equally* good in any *two* places in the United States. If he be a new-comer to the place he occupies, he *has it all to learn*, and the cheapest way to learn it is to examine the *best* fruits which have been successfully cultivated in his neighborhood, and adopt them; and if there be not varieties enough, then *cautiously* to select others which are known to flourish in like soils and climates to his own. I have myself—and have known others—to take the *say-so* of people a good ways off, and they, probably, poor judges of the real qualities of fruits, and introduce varieties into their orchards, which, when they came into bearing, proved worthless, and the trees had to be headed down and grafted again.

A dozen kinds of apple, pear, and half as many kinds of peaches, cherries, and plums, are all that any one needs for market purposes, or for family use. For the locality of Staten-Island, Long-Island, or New-Jersey, thirty miles up the north or east rivers, from New-York, the selections here given are good, and quite sufficient.

Notes on Landscape Gardening.—I should like to see a proper definition of the term "Landscape Gardening." There certainly can be no *fixed rule* about it. Many ingenious and many absurd books, have been written on this subject. The best American Landscape work is that of DOWNING, and the best short essays which I have seen, have appeared in this paper. A *professor* of landscape gardening should have rare *natural* qualities. He should first be a devoted, an enthusiastic lover of nature in all her works of earth, rocks, water, and trees. He should possess an enlarged capacity for discrimination, combination, and arrangement. He should well understand the features of a piece of ground, and its

capabilities; and, added to all these, he should be a man of fine natural taste, and that taste highly cultivated by observation and travel. Any body can ditch a piece of low land, fill up a hole, or dig down a hill or a bank. But it takes a man of mind to catch the salient points of view from a given piece of ground, and to displace the trees and shrubbery from the intercepting angles, or to cover the bald spots between with the proper shade and foliage.

Trees, *Trees*, TREES! They are the poetry, the beauty, the grandeur—the repose, the *features* of a country place. They are the greatest attraction; and properly distributed, and selected, in variety and keeping with the topographical—this word don't sound well here—character of the surface, waters, and distant views will come in of themselves. Never employ an empiric in landscape gardening to do your work, if you want it well done. You might as well engage a “pretender” to invade, and establish himself *successfully* on the throne of Old England, as to suppose that your charlatan landscape gardener, can make a “thing of beauty,” by the aid of triangles and trapezoids.

The Improvement of Gardeners.—There is nothing like *association* for improvement in anything worth improvement at all. The great difficulty in the way of association in *this* line, is the jealousies and rivalries of our gardeners. They are mostly foreigners, and although clever men apart, have too much of the spirit of the “Fardowners” and “Corkonians,” when brought into competition. I don't mean to say anything offensive, my good friends; but I know a dozen excellent gardeners—all “old countrymen”—in my neighborhood, clever, honest, upright men, all; but they are too jealous of each other to associate and mutually improve. Shake hands, and come together. You'll all be the better for it.

J. JEFFREYS.

NOTES IN THE KITCHEN GARDEN.

BY A PRACTICAL MAN, NEW-YORK.

PERHAPS there is no season when the want of a supply of good vegetables for the family is more felt, than the spring. At this season the winter's stock of everything but potatoes, is pretty well exhausted, or, which amounts to the same thing, is become good for nothing. The gardener who has, at the opening of the spring, plants of nice salad that he has kept through the winter, or grown in the hot-bed in frames, has what may be considered the most important of spring vegetables. Besides this, most ordinary gardeners will have at this season, only a little asparagus. This is but a sorry show for the kitchen garden; in fact one that any gardener or housekeeper ought to be ashamed of—in a climate where it is as easy to grow vegetables as this.

What ought a good gardener to have ready for the table, simply in the open air, by the first of April? Let us see: German Greens, Sea Kale, Salsify, Rhubarb, Asparagus, Spinach. This is a respectable show, yet every good kitchen gardener in the northern states ought to furnish it as a matter of course, and will do so with a very little care. I shall say a word or two about some of these vegetables.

GERMAN GREENS, or Siberian Kale. The Horticulturist first made this vegetable known to thousands in this country. In Germany and Russia it has been cultivated for a hundred years. It is in reality, a sort of kale or cabbage, growing with spreading leaves like a turnip—but the leaves are much crimped or curled. It is one of the hardiest of all vegetables—will grow in any soil, and stand all kinds of weather. As soon as the spring

opens it commences to grow, and the leaves are fit in a week after to cut for boiling. It is cooked and served up just like any other kind of "greens," and is something in flavor, between cauliflowers and asparagus—very excellent. The seeds are planted broadcast, like turneps, in August and September, and twenty feet square will supply a family. It is emphatically a poor man's vegetable, requiring so little attention, and affording so much food; it will hold its place in the best garden where it is once afforded a trial.

SEA KALE.—I think this is a vegetable too seldom seen in this country. I do not remember to have found it for sale in any of the city markets more than once or twice. I suppose this is because it demands a little attention in the spring, and besides, it does not yield so large crops as asparagus. The flavor is, however, more delicate to my taste than asparagus, and as it has the merit of being more of a novelty, the gardener should always have a bed of it about twelve by twenty or thirty feet. It wants deep, rich soil, like asparagus, and beds made in the same way, answer well for sea kale. Sandy soil is the most congenial to it. To make beds of sea kale, sow the seeds in April, and thin them out, when well growing, so as to leave them about twelve inches apart. In the autumn cover the beds with a little manure, and over this spread three or four inches of black bog earth that has been well pulverized; or, if you have it at hand, tan bark will answer equally as well—charcoal dust is still better. Through this layer, the young shoots will rise in the spring, and force their way up in a *blanched* state. They are then ready for cutting and cooking, as the sea kale, like celery, must be *blanched*. When you have cut over the bed twice, remove the loose materials, except the manure, which, (with the addition of a slight sprinkling of refuse salt,) may be lightly turned under. The plants then grow all summer, and at the end of autumn the blanch covering should be again renewed. Considering how much importance every body seems to attach to the asparagus bed, it is surprising how little sea kale is known. I am sure if one half the ground usually devoted to asparagus, were occupied by a permanent bed of sea kale, it would give more variety, and more satisfaction, at the dinner table.

SALSIFY, or the "vegetable oyster," as its admirers call it, is now pretty generally cultivated, and a limited supply of it may be had in many of our markets. It is as easily raised as parsnips, if the seeds are planted early in April, in the same way—but it should have a place in the richest part of the garden. As the salsify is an excellent winter vegetable, and may be left out in the beds all winter without any injury by the frost, and is unquestionably the most delicate and agreeable of all the root vegetables, there is no reason for its very limited culture. I presume that many who plant it, fail because they sow the seeds too late.

RHUBARB, or *Pie Plant*.—It is remarkable how the cultivation of this has increased within a short time. Twenty years ago it would have been difficult to find a dollar's worth in New-York markets—now thousands of dollars worth are sold annually. As everybody raises it, and many prefer it for tarts to gooseberries themselves, I will not take the trouble to say anything about its general cultivation.

There is one hint about Rhubarb, however, that I will give, as I think it very useful. This is that everybody, fond of early spring tarts, (and who is not,) should have a small plantation near the *stable yard*. If it is only a dozen hills, it will be something well worth while—enough to make you feel that your garden is better than your neighbor's. These hills should be about three feet apart—so as to admit of covering each hill with an old barrel, at the beginning of winter. By having them near the barn-yard, the spaces between the barrels can be filled without any trouble, (by throwing it in from time to time,) with litter and fresh manure from the horse stable. The tops of the barrels should be

only very slightly covered. When the spring opens (unless the winter has been very severe) you will find the barrels quite filled with nice tender stalks and leaves—the stalks much more tender than when grown out of doors. In this way you get a good cutting of Rhubarb full one month before you get it out of doors, especially if your Rhubarb patch is on a sloping south bit of ground. The manure between the barrels keeps the frost out of the ground, while the heat forces the plants to grow inside. When you have cut the stalks twice, the leaves should be allowed to grow, and the barrels and manure cleared away, (a good dressing of the latter being dug in,) so as to let the plants get strength for another season.

A WORKING MAN.

THE ORANGE PEAR—LARGE ORCHARDS NEAR NIAGARA.

BY B. HODGE, BUFFALO.

A. J. DOWNING, Esq.—It is quite possible that the readers of the *Horticulturist* will demand at my hands, some explanation in relation to the Orange Pear, so pathetically alluded to by my friend ALLEN, in the March number of the *Horticulturist*. Well, I am at all times ready to make the *amende honorable*, and more particularly so, when one of my good friends seem to demand it. Now Mr. A. and myself partake something of the character of the legal profession; we speak and write rather pointedly, sometimes; a little sparring occasionally. But it is merely the spice of life, very like the Paddy and his wife—"a little bit of a jar now and then, makes us better friends."

But I must give the history of this Orange Pear. It was introduced here some forty years ago, by an "itinerant" grafting man. And here I must be permitted to tell a short story. The man had engaged to set a few apple scions for my father, and when the job was about completed, he said, would you like to have a few pear scions set? "No," says my father, (then about 55 years old,) "I never shall live to see them bear." "But," says the man, "perhaps some of your children may." Well, a few pear scions were set in the roots of the common *thorn*. Three of these grew, and in time become stately trees. Two of them were the Orange Pear, and the other the "Autumn Pear." The Autumn Pear proved to be very good, of medium size, and one of the most productive I ever saw. My father died in the winter of 1837, and in the autumn previous, he gathered from that one tree, thirty-five bushels of pears, which he sold at one dollar per bushel. The two Orange pear trees also, soon become very productive. I purchased a part of the estate, including one of the Orange pear trees. The other stood only some three feet from my line. I offered \$100 for the tree, with a line of a rod square of land around it, during the life of the tree. My offer was rejected. Well, the trees produced fine crops, and the fruit was then "the best in the market." Two of these noble trees yet survive, and it does one good to look at them. The Autumn pear tree has produced forty bushels of pears in a season. But my poor Orange pear tree has since died. In the autumn I noticed that the leaves seemed to be drooping, as though suffering from drouth. As the ground was very moist at the time, I could not account for the appearance of the tree. The next spring it put forth its leaves, and seemed to be as vigorous as ever, but before midsummer it withered away, and was dead, root and branch. Was this fire blight? It was a great loss, and I would almost apply to myself, the pathetic lines quoted by Mr. ALLEN—"I never nursed a dear Gazelle, &c."

But I have wandered from the main subject. But no matter. These two varieties of

the pear, with a few others of less worth, were all that we had in cultivation. So some thirty years ago—when I first commenced the nursery business here—we propagated them to considerable extent, and sold them too as “one of the best sorts.” Then we knew nothing about such pears as the Bartlett, Seckel, White Doyenne, Louise Bonne de Jersey, Bloodgood, Madaline, Stevens’ Genesee, &c., all of which, together with many more, I have “fancied,” were far superior to the Orange Pear.

In September, 1848, Mr. A. presented this pear before the Pomological Congress, then assembled in Buffalo; not merely the fruit, then in perfection, but also a fine dish of preserves, which all present had an opportunity of tasting. The subject was debated, and it is presumed that all were of the opinion, that the pear would “absorb sugar perfectly and abundantly,” in the same way that a dry sponge will absorb more water than a wet one. Several gentlemen had expressed their opinion, not very complimentary, to the good qualities of the pear. In this crisis, my friend ALLEN arose, and said he wished to hear from Mr. HODGS on the subject. Of course, Mr. H. being thus publicly called on, must take the floor; and it has been said that “this speech killed it stone dead.” Perhaps I was wrong in comparing the pear to the *choke cherry* or to the common *wild cherry*. Indeed, I now acknowledge that neither of them are analogous. I ought to have compared it to the common Morello cherry. It would certainly have given me pleasure to have helped the matter along. And I can most cheerfully subscribe to most of the good qualities given to it by my friend Allen. He says “that for preserving purposes, it has no equal, and that repeated juries of ladies have settled this question.” To this I must be permitted to take exceptions: and I move the court for a new trial, on the ground that these juries have not been regularly impanelled, that the testimony was merely *ex parte*, and also on the ground, that the presiding judge, has not only been partial in his charge to the jury, but also, that he was an interested party. Let a new trial be had, and it can readily be shown, that no dry or yellow fleshed pear will compare favorably, with the rich juicy white fleshed pear. The latter when preserved becomes almost transparent, beautiful to the eye, and of superior flavor. The Orange Pear is well enough; much like the Dutchman’s bank note, not very good or very bad, but about so-so. The tree is a strong, hardy grower, and very productive, and “a good market fruit.” By the way, my friend A. says that this last expression means, “good to sell to people that don’t know any better.”

It is to be presumed, that no one will contend, that the proceedings and decisions of our Pomological Congress, have always been infallible. Far from it. Let me state an instance in which, in my opinion, injustice was done. The Brown Beurre pear was brought up for discussion. Its merits and demerits pretty fully discussed, when one of our Pomological Doctors, (L. F. A.) “moved that it be considered as unworthy of cultivation.” This done, killed it outright. Mr. A. has since cultivated this fruit more successfully, and now thinks well of it. Indeed, I was much gratified to read his remarks on this fruit; they perfectly coincide with my own. Mr. A. is a good cultivator, a discerning pomologist, and a vigorous writer. His remarks on fruit, &c., in the March number of the Horticulturist, I like very well. (Doubtless, just as he will like mine.)

Mr. Allen has a fine farm of near one thousand acres of land, on the head of Grand Island, in the Niagara river. Here he has fine orchards of the apple, pear, cherry, &c. Some four years since, I also purchased two hundred acres of land on the foot of the Island, near the Falls of Niagara. For two or three years past I have been planting out pretty largely of the peach, pear, apple, &c. I had anticipated having, in a few years, one of the largest orchards in Western New-York, but somehow, of late, a new impulse has been given to the orchard on the upper end of the Island, and it now covers no less

than seventy acres, and is rapidly increasing—whether the Orange Pear controversy has had any agency in this matter I cannot say.

Mr. A. and myself are pretty uniform in our opinion, as regards fruit for cultivation, (the Orange Pear always excepted.) For our main stock of winter apples, we have the Baldwin, Northern Spy, and Roxbury Russet. For autumn, the Porter, Fall Pippin and Fameuse. For early, Early Harvest, Williams' Favorite, and large Sweet Bough. Beside these, we cultivate quite a number of other sorts sparingly. Pears, also, comparatively but few varieties, to wit: Bartlett, Seckel, Bloodgood, Madaline, Tyson, Louise Bonne de Jersey, White Doyenne, Stevens' Genesee, Duchess d' Angouleme, Beurre Diel, Ghost Morceau, Winter Nelis, Beurre Easter, &c.

I hope to be able to grow the peach successfully. "Peach Haven" has a northern exposure; the forests adjoining break off the cold westerly winds. For the main crop, I have Crawford's Early; more of this than any other variety. Early York, Honest John, Royal George, Grosse Mignone, Late Red Rareripec, Crawford's Late, &c. We had a few samples of peaches last year, that looked about right. Mr. ALLEN had a fine sprinkling of apples on his trees last autumn; more beautiful fruit I never saw. The Porter and Northern Spy Apples were truly fine. We have no fears in regard to growing the Northern Spy on the Island. Our Boston folks say that it does not succeed well there. Well, then we will lay them under contribution to us—for it is truly *the* apple for the spring of the year, and they cannot afford to do without it.

We have had one of the most extraordinary cold winters ever known here, during a residence of over forty years. I am quite certain that I never passed through one more severe; and yet the peach buds are but partially killed. The Cedar of Lebanon and the Cedar Deodar, are but little injured; and even the Osage Orange has merely suffered a little in the top branches. We have had continuous cold weather, and most of the time cloudy. It is the freezing and thawing, accompanied by the rays of a bright sun, that proves so destructive to tender trees and plants. Yours very truly,

B. HODGE.

Buffalo, March, 1852.

REVIEWS.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY, with an abstract of the Proceedings of the County Agricultural Societies. Vol. X. 1851.

THE annual volume of Transactions of the New-York State Agricultural Society lies before us, a goodly octavo of over 700 pages. We find it more than usually filled with interesting facts, valuable reports, and able speeches, on the topics that belong to the culture of the soil.

First of all, in importance and completeness, we place Mr. DELAFIELD'S, (the late President,) "general view and Agricultural Survey of the County of Seneca." We do not remember to have seen any where, in the annals of American husbandry, so perspicuous, comprehensive, and valuable a report, embracing all that relates to the local history, geography, scientific facts, and practical agriculture of a district of country, as this survey of Mr. DELAFIELD'S. Though intended to apply directly to only a small portion of the broad farm-lands of the State of New-York, a good part of it may be read with the greatest advantage by every intelligent farmer in the northern states. Mr. DELAFIELD is a practical farmer himself, in our best farming district, and it needs but a little such leaven as such minds are made of, to create a new moving spirit in the hitherto inert and cold

man of those who hold the plow handles. We consider the latter half of this report as a most valuable book of reference for all intelligent farmers.

The Prize Essay of Mr. THOMAS, on "Agricultural Dynamics," which might have been called the natural philosophy of the farm, we should like to see printed, bound, and hung up in every work-shop, tool-room, and farmer's book-shelf, in the country. Without containing one word that is new, it gives the reason, and explains the action of mechanical powers, and the forces of nature generally, with illustrations so directly drawn from the farmer's daily routine, that it gives a direct meaning and value to every point, rarely found in text books devoted to the subject.

With every year's volume of these Transactions, we notice with satisfaction, the increase of interest about agricultural education. Almost every speech made at the county societies last year, alluded distinctly to its importance, and several able addresses before the state and the local societies, take the strongest ground on this topic. Nothing seems wanting now, but some concert of action between the different county societies, for the purpose of pressing the subject on the attention of the legislature, in order to secure a practical farm-school, endowed by the state. The law-makers will never take any decided action in the matter till the farmers besiege the capital of the state with flails in hand, and lay their strong hands on the members who feed them with fine compliments, but lay their petitions on the table.

One of the most valuable features—perhaps the most valuable, in these Transactions of the State Society, is the account given under affidavit, by those cultivating the "premium farms," of their management, and routine of cultivation. The true test of ability is success, all the world over, and the best possible mode of finding out what can be realised by farming, in any district of country, is to look carefully into the practical results—the cost and profit of the crops on farms that are so managed as to pay well.

A capital example of this kind is the second premium farm, of last year's competition—that of Mr. DANIEL D. T. MORE of Watervliet, near Albany. Mr. M. bought, as it appears, five years ago, a farm of one hundred and eighty-five acres, a sandy loam, worn down by having been leased to "skinner," for fifty years running. The buildings were all decayed, and had to be either pulled down or destroyed by Mr. M. on his taking possession.

This farm was let, before MORE bought, for \$100 a year, and even this was complained of as too high a rent. The tenant sold all he could raise upon it, for \$400 a year. Mr. MORE, nevertheless, bought it, "against the advice of all his friends," paid all the money that he had or could raise upon the purchase money, and had to pay more as interest than the former occupant paid as rent.

"The land was so much exhausted," says Mr. M. in his statement, "that for two years I could only raise white beans." Not a very promising prospect surely. Nevertheless, he undertook a system of deep plowing, and bringing his land into condition again by *plowing under green clover*, using plaster to promote the growth of the clover, at the rate of about 250 pounds to the acre.

Mr. MORE, as fast as he brought his land into heart, adopted a rotation of crops, and applying manure as follows: "Plow under clover, plant corn, follow with potatoes, and then rye, with a top dressing of manure, not so much for the benefit of the rye, as for the clover and future crops. I am satisfied," he adds, "that my land has improved rapidly from this mode, in fact at such a rate, that I shall not be able to follow it, so far as the rye crop is concerned."

Now it appears that Mr. MORE has made this old worn out farm, that would not pay a

rent of \$100, and whose annual product was \$400, show for the year 1851, a total receipt account of \$4,852.51—which, against a total expense account, (of farm and family,) of \$2,174.85, leaves a clear net profit for one year, of \$2,678.16. And during the five years he has been about this course of improvement, he has erected a new and substantial dwelling house, farm buildings, and fences; paid all the interest and part of the principal, besides the last year's profits.

If any body after this, says there is nothing to be learned in farming—that intelligence and system applied to agriculture. will not, even under the most unfavorable circumstances, produce the same favorable results as when applied to any other practical business; if any body says that the "worn out" lands of the Atlantic states need any thing but a *master*, i. e., a man who finds out and respects nature's laws, not ignores and despises them, we turn him over to such men as Mr. MORE. His success is a better appeal to the state to educate the farmers generally, by a *practical school*, than all the speeches that will be made on the subject in the legislature, at three dollars a day, from now till the millennium. Oh, generation of *skinners*—ignorant earth-robbers and land-pirates, when will you give place to cultivators who look deeper in the furrow than the horses who drag the plough through it!

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CLOVERNOOK, or *Recollections of our Neighborhood in the West*: By ALICE CARY.
New-York. REDFIELD, publisher.

IF any of our town readers, sated with the artificial perfumes of town civilization, have ever strolled into the country some soft, warm morning in June, when the wild grape-vine is in full bloom, and inhaled the delicious odor of its unseen blossoms, floating upon its still air, they will understand how this little volume of ALICE CARY's affects us, after the loads of French and English "Society Novels," that are turned out by our great publishing houses by the cart-loads. Natural, sincere, and home-like, as the sight and song of the robin red-breast that skips over the lawn, are the pictures of rural life that it presents to the mind's eye. And it is perhaps in this, that they are painted with the genuine colors of *our nature*—the foregrounds are the farm pictures of the American settler, the skies are filled with the heat and flush of American harvests, and the fireside conversations are so genuinely homely and truthful, with their mingling of romance and stern reality, that they will seem only too natural to be interesting to many of those to whose daily lives the mirror is thus held up. But there is also a feeling of tenderness and beauty which runs through these pages, that gives a poetic charm to the simple stories of rustic life they portray, and bathing there, in that magic atmosphere of genius, which, like the glory of a sunset after a summer shower, makes a paradise of the old familiar landscape.

It is curious to see how the truly national literature seems to be developing itself, rather in the hands of our female writers, than in the books of our men. Miss COOPER's "Rural Hours," and this volume of *Rural Stories* by Miss CARY, are two of the most perfect transcripts of rural home life and scenes, that have been written in any country; and no one but an American writer, who has lived and breathed the air of our own nature, with a strong feeling of its peculiar life and individuality, could have written such books. By their profound and earnest sympathy with *nature*, it is that the female writers seem to have caught the key-note of our *Rans de Vaches* that has escaped the more highly prized intellectual sufficiency of our authors of the other sex.

Upon the advent of such books as these, we look with the greatest satisfaction. Perhaps the most striking fact in America, to observing and thoughtful foreigners, is how lit-

the relation the intellectual and social culture of Americans, has to America—outside of the pale of politics. Our belle-letters, our reviews, our fashions, our very thoughts on most matters that relate to society and manners, are essentially and avowedly foreign. "The glass of fashion and the mould of form," to us comes in the shape of a milliner's band-box from Paris, or the conversation of the fictitious lords and ladies of the last popular novel from England. Unfortunately, too, the tone of our society in the rural districts, is only a bad copy of that in our cities, and it may be safely said, that the only thing in America which has little or nothing in common with the new world, is the social culture of a large part of the intelligent, independent classes. Foreign literature, foreign affectations, foreign ideas badly naturalised, in our republic, instead of a high ideal of the true gentleman and republican of the new world—more independent than kings, far more simple than men bred in courts, with too much intelligence to be coarse or vulgar; too much consciousness of the full enjoyment of his natural rights, to feel any unworthy inferiority, and too much respect for the rights of others, and the value of human nature, ever to be unjust to others. This is the social development to which we ought to grow—this the model of a republican gentleman, which ought to be held up to the eyes of our youth. FRANKLIN, a man who is only, or for the most part, remembered as a man of science, was ever remarkable as a type of the true gentleman of our Republic. Taken from the printing office, and placed in the midst of the brilliant court of Versailles, or in the cabinet councils of English peers, he always made men feel that there, their rank and fashion were only luxuries, and that he was, in his simple frankness and courteous dignity, the intrinsic, *natural* gentleman.

Whether in these later days of our Republic, we have as clear instincts on such subjects,—whether in the highest aims of our own social life, both in town and country, there is not more of the false glitter, and less of the true gold, than in FRANKLIN'S day, we leave our readers to judge. Certain it is, that nothing contributes so much to denationalise us, as the growing habit of our more refined and cultivated minds, of looking wholly to the old world for that social refinement and elevation, which, to be genuine, should spring from the institutions of the new.

ALICE CAREY'S *Clovernook*, is a series of sketches of rustic life in Ohio and the West, so genuinely drawn that the farmers' families, the country clergyman, the deacon, the school-master, and the whole dramatis personæ of the country, with the mingled prose and romance of their lives, rise as vividly before us as the old familiar mill, whose rumble, and strange mixture of wheels and pinion, made the mystery of our childhood. With a quiet power, she makes the commonest events of a country life interesting, and touches the landscape that forms the background or foreground to her figures, that makes you marvel why our poets are so dull. The following extract, taken almost at random, will serve, perhaps as well as any other, to show the power and grace of Miss CAREY'S mind.

"It has always seemed to me one of the most beautiful provisions of Providence, that circumstances, however averse we be to them at first, close about us presently like waves, and we would hardly unwind ourselves from their foldings, and standing out alone, say, let it be thus or thus, if it were possible. When the morning comes through her white gates, lifting her eyes smilingly on us, as she trails her crimson robes through the dew, we would fain have it morning all the day. But when noon, holding in leash the shadows, goes lazily winking along the hill tops, and the arms of labor rest a little from their work, where the fountain bubbles, or the well lies cool, it seems a good season, and we would keep back the din that must shortly ruffle its placid repose. And when the phantoms of

twilight troop out of the dim woods, with the first stars, whether the moon have all her golden filling, or hang like a silver ring in the blue arching of the sky, the time seems the most beautiful of all, and we are ready to say to the shadows, crouch back a little, let the ashen gray prevail. Night broods over the world, deep and solemn; away above us the still constellations go on their way, and throwing earthward wildering beams like golden ladders, whereon our thoughts may climb to heaven; clouds, with dark ridges, out the blue, or build a wilderness of black along the edges of the horizon, or lie against each other, like squadrons in the offing of a mighty sea; and whether the winds run laughingly up and down the hills, or kennelled among the thick forests, whine dismally and low, night seems a blessed time—a season of thought, or of dreams, or of peaceful sleep.

And so with the various seasons of the year. May, with her green lap full of sprouting leaves and bright blossoms, her song-birds making the orchards and meadows vocal, and rippling streams and cultivated gardens; June, with full blown roses and humming-bees, plenteous meadows and wide cornfields, with embattled lines rising thick and green; August, with reddened orchards, and heavy-headed harvests of grain; October, with yellow leaves and swart shadows; December, palaced with snow, and idly whistling through his numb fingers—all have their various charm; and in the rose-bowers of summer, and as we spread our hands before the torches of winter, we say, joyfully, "Thou hast made all things beautiful in their time." We sit around the fireside, and the angel, feared and dreaded by us all, comes in, and one is taken from our midst—hands that have caressed us, locks that have fallen over us like a bath of beauty, are hidden beneath shroud-folds—we see the steep edges of the grave, and hear the heavy rumble of the clods; and in the burst of passionate grief, it seems that we can never still the crying of our hearts. But the days rise and set, dimly at first, and seasons come and go, and by little and little the weight rises from the heart, and the shadows drift from before the eyes, till we feel again the spirit of gladness, and see again the old beauty of the world. The circle is narrowed, so that the vacant seat reminds us no longer of the lost, and we laugh and jest as before, and at last marvel where there was any place for the dead. Traitors that we are to the past! Yet it is best and wisest so. Why should the children of time be looking backward where there is nothing more to do? Why should not the *now* and the *here* be to us of all periods the best, till the future shall be the present and time eternity?"

The following sketch of "Mrs. HILL and Mrs. TROOST," is so true to the life, and the point of the story is so entirely within the scope of this journal, that we give it as a welcome contribution. Our readers will find in Mrs. TROOST a capital specimen of the mistresses of tumble-down dwellings, who always accuse nature of making "every thing die" that they plant; while Mrs. HILL is one of those happy, practical, excellent women, who make order and sunshine and a spirit of content and beauty grow up around them, wherever they are.

"MRS. HILL AND MRS. TROOST."

"It was just two o'clock of one of the warmest of the July afternoons. Mrs. Hill had her dinner all over, had put on her clean cap and apron, and was sitting on the north porch, making an unbleached cotton shirt for Mr. Peter Hill, who always wore unbleached shirts at harvest time. Mrs. Hill was a thrifty housewife. She had been pursuing this economical avocation for some little time, interrupting herself only at times, to "shu!" away the flock of half-grown chickens that came noisily about the door for the crumbs from the table cloth, when the sudden shutting down of a great blue cotton umbrella caused her to drop her work, and exclaim—

"Well, now, Mrs. Troost! who would have thought you ever *would* come to see me!"

"Why, I have thought a great many times I would come," said the visitor, stamping her little feet—for she was a little woman—briskly on the blue flag stones, and then dusting them nicely with her white cambric handkerchief, before venturing on the snowy floor of Mrs. Hill. And, shaking hands, she added, "It has been a good while, for I remember when I was here last I had my Jane with me—quite a baby then, if you mind—and she is three years old now."

"Is it possible?" said Mrs. Hill, untying the bonnet strings of her neighbor, who sighed, as she continued, "Yes, she was three along in February;" and she sighed again, more heavily than before, though there was no earthly reason that I know of why she should sigh, unless perhaps the flight of time, thus brought to mind, suggested the transitory nature of human things.

Mrs. Hill laid the bonnet of Mrs. Troost on her "spare bed," and covered it with a little, pale-blue crape shawl, kept especially for like occasions; and taking from the drawer of the bureau a large fan of turkey feathers, she presented it to her guest, saying, "A very warm day, isn't it?"

"Oh, dreadful, dreadful; it seems as hot as a bake oven; and I suffer with heat all summer, more or less. But it's a world of suffering;" and Mrs. Troost half closed her eyes, as if to shut out the terrible reality.

"Hay-making requires sunshiny weather, you know; so we must put up with it," said Mrs. Hill; "besides, I can mostly find some cool place about the house; I keep my sewing here on the porch, and, as I bake my bread or cook my dinner, manage to catch it up sometimes, and so keep from getting over-heated; and then, too, I get a good many stitches taken in the course of the day."

"This is a nice, cool place—completely curtained with vines," said Mrs. Troost; and she sighed again; "they must have cost you a great deal of pains."

"Oh, no—no trouble at all; morning glories grow themselves; they only require to be planted. I will save seed for you this fall, and next summer you can have your porch as shady as mine."

"And if I do, it would not signify," said Mrs. Troost; "I never get time to set down from one week's end to another; besides, I never had any luck with vines; some folks have'n't, you know."

Mrs. Hill was a woman of a short, plethoric habit; one that might be supposed to move about with little agility, and to find excessive warmth rather inconvenient; but she was of a happy, cheerful temperament; and when it rained she tucked up her skirts, put on thick shoes, and waddled about the same as ever, saying to herself, "This will make the grass grow," or "it will bring on the radishes," or something else equally consolatory.

Mrs. Troost, on the contrary, was a little thin woman, who looked as though she might move about nimbly at any season; but, as she herself often said, she was a poor unfortunate creature, and pitied herself a great deal, as she was in justice bound to do, for nobody else cared, she said, how much she had to bear.

They were near neighbors—these good women—but their social interchanges of tea-drinking were not of very frequent occurrence, for Mrs. Troost had nothing to wear like other folks; sometimes it was too hot, and sometimes it was too cold; and then again, nobody wanted to see her, and she was sure she didn't want to go where she wasn't wanted. Moreover, she had such a great barn of a house as no other woman ever had to take care of. But in all the neighborhood it was called the big house, so Mrs. Troost was in some measure compensated for the pains it cost her. It was however, as she said, a barn of a place, with half the rooms unfurnished, partly because they had no use for them, and partly be-

cause they were unable to get furniture. So it stood right in the sun, with no shutters, and no trees about it, and Mrs. Troost said she didn't suppose it ever would have. She was always opposed to building it, but she never had her way about anything. Nevertheless, some people said Mr. Troost had taken the dimensions of his house with his wife's apron strings—but that may have been slander.

While Mrs. Troost sat sighing over things in general, Mrs. Hill sewed on the last button, and shaking the loose threads from the completed garment, held it up a moment to take a satisfactory view, as it were, and folded it away.

"Well, did you ever!" said Mrs. Troost; "you have made half a shirt, and I have got nothing at all done. My hands sweat so I can't use the needle, and its no use to try."

"Lay down your work for a little while, and we will walk in the garden.

So Mrs. Hill threw a towel over her head, and taking a little tin basin in her hand, the two went into the garden—Mrs. Troost under the shelter of the blue umbrella, which she said was so heavy that it was worse than nothing. Beans, radishes, raspberries and currants, besides many other things, were there in profusion, and Mrs. Troost said everything flourished for Mrs. Hill, while her garden was all choked up with weeds. "And you have bees, too—don't they sting the children, and give you a great deal of trouble? Along in May, I guess it was, Troost, (Mrs. Troost always called her husband so,) bought a hive, or rather he traded a calf for one—a nice, likely calf, too, it was—and they never did us one bit of good"—and the unhappy woman sighed.

"They do say," said Mrs. Hill, sympathizingly, "that bees won't work for some folks; in case their king dies they are likely to quarrel, and not do well; but we have never had any ill luck with ours; and we last year sold forty dollars worth of honey, besides having all we wanted for our own use. Did yours die off, or what, Mrs. Troost?"

"Why," said the ill-natured visitor, "my oldest boy got stung one day, and, being angry, upset the hive, and I never found it out for two or three days; and, sending Troost to put it up in its place, there was not a bee to be found, high or low."

"You don't tell! the obstinate little creatures! but they must be treated kindly, and I have heard of their going off for less things."

The basin was by this time filled with currants, and they returned to the house. Mrs. Hill, seating herself on the sill of the kitchen door, began to prepare her fruit for tea, while Mrs. Troost drew her chair near, saying, "Did you ever hear about William McMicken's bees?"

Mrs. Hill had never heard, and expressing an anxiety to do so, was told the following story:

"His wife, you know, was she that was Sally May, and its an old saying—

'To change the name, and not the letter,
You marry for worse, and not for better.'

"Sally was a dressy, extravagant girl; she had her bonnet 'done up' twice a year always, and there was no end to her frocks and ribbons and fine things. Her mother indulged her in everything; she used to say Sally deserved all she got; that she was worth her weight in gold. She used to go everywhere, Sally did. There was no big meeting that she was not at, and no quilting that she didn't help to get up. All the girls went to her for the fashions, for she was a good deal in town at her Aunt Hanner's, and always brought out the new patterns. She used to have her sleeves a little bigger than anybody else, you remember, and then she wore great stiffeners in them—la me! there was no end to her extravagance.

"She had a changeable silk, yellow and blue, made with a surplus front; and when she wore that, the ground wasn't good enough for her to walk on, so some folks used to say; but I never thought Sally was bit proud or lifted up; and if anybody was sick, there was no better-hearted creature than she; and then, she was always good-natured as the day was long, and would sing all the time at her work. I remember, along before she was married, she used to sing one song a great deal, beginning

'I've got a sweetheart with bright black eyes;'

and they said she meant William McMicken by that, and that she might not get him after all—for a good many thought they would never make a match, their dispositions were so contrary. William was of a dreadful quiet turn, and a great home body; and as for being rich, he had nothing to brag of, though he was high larnt, and followed the river as clark sometimes."

Mrs. Hill had by this time prepared her currants, and Mrs. Troost paused from her story while she filled the kettle, and attached the towel to the end of the well-sweep, where it waved as a signal for Peter to come to supper.

"Now, just move your chair a leetle nearer to the kitchen door if you please," said Mrs. Hill, "and I can make up my biscuit, and hear you too."

Meantime, coming to the door with some bread-crumbs in her hand, she began scattering them on the ground, and calling, "Biddy, biddy, biddy—chicky, chicky, chicky"—hearing which, a whole flock of poultry was about her in a minute; and stooping down, she secured one of the fattest, which, an hour afterwards, was broiled for supper.

"Dear me, how easily you do get along!" said Mrs. Troost.

And it was sometime before she could compose herself sufficiently to take up the thread of her story. At length, however, she began with—

"Well, as I was saying, nobody thought William McMicken would marry Sally May. Poor man, they say he is not like himself any more. He may get a dozen wives, but he'll never get another Sally. A good wife she made him, for all she was such a wild girl.

"The old man May was opposed to the marriage, and threatened to turn Sally, his own daughter, out of house and home; but she was headstrong, and would marry whom she pleased; and so she did, though she never got a stitch of new clothes, nor one thing to keep house with. No; not one single thing did her father give her when she went away, but a hive of bees. He was right down ugly, and called her Mrs. McMicken, whenever he spoke to her after she was married; but Sally didn't seem to mind it, and took just as good care of the bees as though they were worth a thousand dollars. Every day in winter she used to feed them—maple-sugar, if she had it; and if not, a little Muscovade in a saucer or some old broken dish.

"But it happened one day that a bee stung her on the hand—the right one, I think it was—and Sally said right away that it was a bad sign; and that very night she dreamed that she went out to feed her bees, and a piece of black crape was tied on the hive. She felt that it was a token of death, and told her husband so, and she told me and Mrs. Hanks. No, I won't be sure she told Mrs. Hanks, but Mrs. Hanks got to hear it some way."

"Well," said Mrs. Hill, wiping the tears away with her apron, "I really didn't know, till now, that poor Mrs. McMicken was dead."

"Oh, she is not dead," answered Mrs. Troost, "but as well as she ever was, only she feels that she is not long for this world." The painful interest of her story, however, had kept her from work, so the afternoon passed without her having accomplished much—she never could work when she went visiting.

Meantime Mrs. Hill had prepared a delightful supper, without seeming to give herself the least trouble. Peter came precisely at the right moment, and, as he drew a pail of water, removed the towel from the well-sweep, easily and naturally, thus saving his wife the trouble.

"Troost would never have thought of it," said his wife; and she finished with an "Ah, well!" as though all her tribulations would be over before long.

As she partook of the delicious honey, she was reminded of her own upset hive, and the crisp-red radishes brought thoughts of the weedy garden at home; so that, on the whole, her visit, she said, made her perfectly wretched, and she should have no heart for a week; nor did the little basket of extra nice fruit, which Mrs. Hill presented her as she was about to take leave, heighten her spirits in the least. Her great heavy umbrella, she said, was burden enough for her.

"But Peter will take you in the carriage," insisted Mrs. Hill.

"No," said Mrs. Troost, as though charity were offered her; "it will be more trouble to get in and out than to walk"—and so she trudged home, saying, "Some folks are born to be lucky."

ALICE CARY has been pronounced by the reviewers to be the superior of Miss MITFORD, whose rural sketches of England have so long held the highest rank in this kind of composition. *Clovernook* is, in short, one of the most popular books of the season, and if any of our readers, who wish to enjoy a real American *country* book, have not already met with it, we commend it to them, with the fullest confidence, as one of the best of fire-side companions.

Foreign and Miscellaneous Notices.

THE SNAKE PLANT OF SOUTH AMERICA.—Venomous serpents abound in all the *tierras calientes* (hot lands) of America. The frequent fatality following their bite—particularly among the Indians, who roam barefoot through the tangled woods—renders the knowledge of any counteracting remedy a matter of great importance to these people. In consequence, much diligence has at all times been used in seeking for such remedies; and many, more or less efficacious, have from time to time been discovered.

That of surest virtues yet known is a plant called the *guaco*—the sap of whose leaves is a complete antidote against the bite of the most poisonous reptiles. The *guaco* is a species of willow. Its root is fibrous, the stem straight and cylindrical when young; but as it approaches maturity, it assumes a pentagonal form, having five salient angles. The leaves grow lengthwise from the stem, opposite, and cordate. They are of a dark green color mixed with violet, smooth on the under surface, but on the upper rough with a slight down. The flowers are of a yellow color, and grow in clusters—each calyx holding four. The corolla is monopetalous infundibuliform, and contains five stamens uniting at their anthers into a cylinder which embraces the style with its stigma much broken.

The *guaco* is a strong healthy plant, but grows only in the hot regions, and flourishes best in the shade of other trees, along the banks of the streams. It is not found in the colder uplands (*tierras frias*;) and in this disposal nature again beautifully exhibits her design, as here exist not the venomous creatures against whose poisons the *guaco* seems intended as an antidote.

That part of the plant which is used for the snake-bite is a sap or tea distilled from its leaves. It may be taken either as a preventive or cure: in the former case, enabling him who has drank of it to handle the most dangerous serpents with impunity. For a long time the antidotal qualities of the *guaco* remained a great mystery, and was confined to a few among the native inhabitants of South America. Those of them who possessed the secret were interested in preserving it, as through it they obtained considerable recompenses, not only from those who had been bitten by venomous snakes, but also from many who were curious to witness the feats of these snake-tamers themselves. However, the medicinal virtues of the *guaco* are now generally known in all countries where it is found; and its effects only cause astonishment to the stranger or traveller.

Being at Margarita some time ago, I heard of this singular plant, and was desirous of wit-

nessing the test of its virtues. Among the slaves of the place there was one noted as a skillful snake-doctor; and as I enjoy the acquaintance of his master, I was not long in obtaining a promise that my curiosity should be gratified. A few days after the negro entered my room, carrying in his hands a pair of coral-snakes, of that species known as the most beautiful and venomous. The negro's hands and arms were completely naked; and he manipulated the reptiles, turning them about, and twisting them over his wrists with the greatest apparent confidence. I was for a while under the suspicion that their fangs had been previously drawn; but I soon found that I had been mistaken. The man convinced me of this by opening the mouths of both, and showing me the interior. There, sure enough, were both teeth and fangs in their perfect state; and yet the animals did not make the least attempt to use them. On the contrary, they seemed to exhibit no anger, although the negro handled them roughly. They appeared perfectly innocuous, and rather afraid of him I thought.

Determined to assure myself beyond the shadow of a doubt, I ordered a large mastiff to be brought into the room and placed so that the snakes could reach him. The dog was sufficiently frightened, but being tied he could not retreat; and after a short while one of the serpents "struck," and bit him on the back of the neck. The dog was now set loose, but did not at first appear to notice the wound he had received. In two or three minutes, however, he began to limp and howl most fearfully. In five minutes more he fell, and struggled over the ground in violent convulsions, similar to those occasioned by hydrophobia. Blood and viscous matter gushed from his mouth and nostrils, and at the end of a quarter of an hour by the watch he was dead.

Witnessing all this, I became extremely desirous of possessing the important secret—which by the way, was not then so generally known. I offered a good round sum; and the negro, promising to meet my wishes, took his departure.

On the following day he returned, bringing with him a handful of heart shaped leaves, which I recognised as those of the *bejuco de guaco*, or snake-plant. These he placed in a bowl, having first crushed them between two stones. He next poured a little water into the vessel. In a few minutes maceration took place, and the "tea" was ready. I was instructed to swallow two small spoonfuls of it, which I did. The negro then made three incisions in each of my hands at the forking of my fingers, and three similar ones on each foot between the toes. Through these he inoculated me with the extract of the guaco. He next punctured my breast, both on the right and left side, and performed a similar inoculation. I was now ready for the snakes, several of which, both of the coral and cascabel species, the negro had brought along with him.

With all my wish to become a snake-charmer, I must confess that at sight of the hideous reptiles I felt my courage oozing through my nails. The negro, however, continued to assure me; and as I took great pains to convince him that my death would cost him his life, and I saw that he still entreated me to go ahead, I came at length to the determination to run the risk. With a somewhat shaky hand I took up one of the corals, and passed it delicately through my fingers. All right. The animal showed no disposition to bite, but twisted itself through my hands, apparently cowering and frightened. I soon grew bolder, and took up another and another, until I had three of the reptiles in my grasp at one time. I then put them down and caught a snake of the cascabel species—the rattlesnake of the north. This fellow behaved in a more lively manner, but did not show any symptoms of irritation. After I had handled the reptile for some minutes, I was holding it near the middle, when to my horror, I saw it suddenly elevate its head, and strike at my left arm! I felt that I was bitten, and flinging the snake from me, I turned to my companion with a shudder of despair. The negro, who with his arms folded had stood all the while calmly looking on, now answered my quick and terrified inquiries with repeated assurances that there was no danger whatever, and that nothing serious would result from the bite. This he did with as much coolness and composure as if it had been only the sting of a mosquito. I was more comforted by the manner of my companion than by his words; but to make assurance doubly sure, I took a fresh sup of the guaco tea, and waited tremblingly the result. A slight inflammatory swelling soon appeared about the orifice of the wound, but at the expiration of a few hours it had completely subsided, and I felt that I was all right again.

On many occasions afterwards I repeated the experiment of handling serpents I had myself taken in the woods, and some of them of the most poisonous species. On these occasions I adopted no further precaution than to swallow a dose of the guaco sap, and even chewing the leaves of the plant itself was sufficient. This precaution is also taken by those—such as hunters and wood-choppers—whose calling carries them into the thick jungle of the southern forest, where dangerous reptiles abound.

The guaco has no doubt saved many a life. The tradition which the Indians relate of the discovery of its virtues is interesting. It is as follows: In the *tierras calientes* there is a bird of the kite species—a *gavilan*, whose food consists principally of serpents. When in search of its victims, the bird utters a loud but monotonous note, which sounds like the word *gua-co* slowly pronounced. The Indians allege that this note is for the purpose of calling to it the snakes, over whom it possesses a mysterious power, that summons them forth from their hiding-places. This of course is pure superstition, but what follows may nevertheless be true.

They relate that before making its attack upon the serpent, the bird always eats the leaves of the bejuco de guaco. This having been observed, it was inferred that the plant possessed antidotal powers, which led to the trial and consequent discovery of its virtues.—*Household Words*.

HOW TO GET RID OF COCKROACHES.—Mr. Tewkesbury, of Nottingham, in a letter to the *Manx Sun*, says:—"I forward an easy, clean, and certain method of eradicating these insects from dwelling-houses. A few years ago my house was infested with cockroaches (or 'clocks,' as they are called here,) and I was recommended to try cucumber peelings as a remedy. I accordingly, immediately before bed-time, strewed the floor of those parts of the house most infested with the vermin with the green peel, cut not very thin from the cucumber, and sat up half an hour later than usual to watch the effect. Before the expiration of that time the floor

where the peel lay was completely covered with cockroaches, so much so, that the vegetable could not be seen, so voraciously were they engaged in sucking the poisonous moisture from it. I adopted the same plan the following night, but my visitors were not near so numerous—I should think not more than a fourth of the previous night. On the third night I did not discover one; but anxious to ascertain whether the house was quite clear of them, I examined the peel after I had lain it down about half an hour, and perceived that it was covered with myriads of minute cockroaches about the size of a flea. I therefore allowed the peel to lie till morning, and from that moment I have not seen a cockroach in the house. It is a very old building; and I am certain that the above remedy only requires to be persevered in for three or four nights, to completely eradicate the pest. Of course it should be fresh cucumber peel every night."—*Builder*.

Domestic Notices.

THE GREAT PALM HOUSE AT KEW.—We have already alluded to this beautiful, tropical glass house, in which the palms and other trees of the equatorial regions, growing in the ground and in huge tubs, reach the altitude and wear the same aspect as in their native clime. The engraving which forms our frontispiece of this month, will enable our readers to form a more definite idea of its external appearance.

There is no doubt that this is the most *beautiful* plant house in the world. Though not so large as the great conservatory at Chatsworth, and but small compared with that miracle of size, the Crystal Palace, it has an airiness and elegance that neither of these latter buildings can boast. This is owing to the exterior of the Kew Palm House, or at least the roof, appearing an unbroken sheet of curved glass—while the others, being constructed on what is called the "ridge and furrow" system, presents a series of *ploughed* or angular roof lines.

The Kew Palm House is one of the largest glass houses in the world—being 362 feet long by 100 feet wide, (in the center,) and 68 feet high. The main ribs of the roof are wrought iron, as well as all the ties. The columns are cast iron, and being hollow, conduct the rain-water from the gutters on the roof to rain-water tanks formed underneath and around the

whole interior of the building. A light gallery runs round the whole, from which, not only the best view of the trees and plants is obtained, but the tops of the trees are watered, the supply being obtained from a reservoir in an ornamental tower at some distance.

"The roof is wholly glazed with sheet glass, *slightly tinged with green*, the tint being given in making the glass, by oxide of copper. This has been done to counteract the injurious effects on the vegetation, arising from the use of white sheet glass, an arrangement proposed by Mr. HUNT, of the Museum of Economic Geology, and practically carried out in this building for the first time."—(London Builder.

To heat the house, there are 28,000 superficial feet of hot water pipes, connected with several boilers, laid under the perforated iron flooring, which forms the paths, &c.

No chimneys being visible, the visitor who examines the building is at a loss to know what becomes of the smoke. He is, in answer, shown in the distance, (550 feet off,) a high Italian tower, to which the flues lead under ground. There is a subterranean passage the whole way from the tower to the heating apparatus, and through this passage runs a small railway with iron wagons to convey the coal and take away

the ashes. In ventilation and other details the building is equally perfect.

The entire cost of this conservatory was about \$160,000. The rich collection of plants which it contains, and the admirable way in which they grow, are worthy of the great national garden in which it stands, and which the British nation keeps up at a large annual cost, for the instruction and delight of any and every person, without any fee whatever, who wishes to enter.

PRACTICAL GARDENERS AND HORT. SOCIETIES.—DEAR SIR: It appears that my remarks on the Penn. Hort. Society have been misunderstood by Mr. Buist. Being myself a member of the society, I cannot well avoid knowing something of its rules and regulations, as well as the profession and abilities of its executive members.

Mr. Buist tells us that the committee of arrangements are all practical gardeners, who subdivide on exhibitions, &c., so that he has endeavored to make my remarks inapplicable to that society. However, I will explain where the difference of opinion lies, so that Mr. Buist, and the readers of the Horticulturist, will see at once that my sentence, "as gardeners have no direct influence with the gentleman of that society," is emphatically applicable where it was intended to apply.

The difference is simply this. Those who Mr. Buist thinks proper to call *practical gardeners*, are nurserymen, and not gardeners at all; and what I mean when speaking of gardeners, is to denote those who hold situations, and are paid as such. But as I never before understood nurseryman and gardener to be a synonymous term, he, Mr. Buist, will probably excuse my error; and perhaps when a few more summers suns have acted upon my dull brain, I shall be able to comprehend that *gardeners* and *nurserymen* are synonymous. My remarks in the January number were written purely for the benefit of the working subscribing competitors; also my remarks on plants and fruit, strictly confined to our own society—for there alone, we have plenty of room for improvement, without travelling further from home. Allow me to ask Mr. Buist, did he suppose the party that revised the prize schedule last January, to be all *practical gardeners*, who discarded the prize for early grapes in pots,

and substituted in its place a collection of Cacti, for which they offer a silver medal. What, I ask, is there to be seen in a *best named collection of Cacti*, not even restricted to be in flower, or part in flower—for a very good reason—they know it is almost impossible to obtain 20 cactuses in flower at the same time, from one proprietor.

What a desirable acquisition will be this new collection to our saloon? But, by-the-bye, there is only one *practical* who grows them, so that the silver medal will be a *walk over*. Where is there another society in the world, composed of *practicals*, that would make such a revision as this? I am asked, where are our *Ericas*, *Fuchsias*, *Pimelias*, *Epacris*, &c. I answer I don't know—but I would suggest to our *practicals*, to pull the weeds out of their pots previous to placing them on the exhibition tables, and then, perhaps, we shall be able to see *where* they are. Yours very respectfully, A WORKING GARDENER. *Philadelphia, March 15.*

WINTER FRUITS GROWN IN WESTERN NEW-YORK.—The production of apples in Western New-York, for 1851, was not as large as usual; and the scarcity both east and west of us, at Rochester, created a demand more than equal to what could be well spared from home consumption—so that at this moment it is barely possible to obtain a single barrel of choice ones.

The qualities grown were in many instances superior, but oftener with great defects.

It may be said that the apple trees planted within the last fifteen or twenty years, are now as fruitful as ever, and bear as fair fruit as they will. Insects and blight affect the trees frequently, and some seasons the fruit is not as good as in other years.

I did myself the honor to send you in 1847, (see Hort. vol. 1, p. 482,) samples of several kinds grown with us, and now forward you specimens of choice ones—so that you may judge how well they compare. You will find:

Northern Spy.

Canada Red or Nonsuch.

Herefordshire Pearmain.

Swaar.

Pomme Grise.

Esopus Spitzenbergh.

Green Sweeting.

The "Canada Reds" sent, are the finest I

have ever seen of the kind, and I am free to admit them a very, *very* choice apple, and a good keeper. The "Northern Spy" I have found to bear me out in all that has been said in its favor, and I am sure a better, or more choice barrel of fruit, has never been sent to Europe, than one of that kind which I packed the past week to send there, which Dr. LINDLEY, Mr. RIVERS, and all the nurserymen in and about London, are to have the privilege of tasting.

Of their keeping qualities, let me tell you. I put my "Spys" as late in the fall as possible, and very soon after they are gathered, into a cellar, kept cool by having a pane of glass taken out of the window, (which remains out all winter,) and place them on wooden frames, about 12 inches from the bottom of the cellar, (the bottom a ground one,) and there let them stand till the first of March. If well selected, the fruit will open sound, and well colored, with a fragrance equalling anything of the fruit kind. About this time they commence ripening, and if pains are taken to head up the barrel, as the fruit is taken out for use, so that the air is excluded, they will keep till June. This is my plan, founded upon experience.

Many of the trees grafted are producing the "Northern Spys," and all I have seen thus far, have been choice; and persons growing them hesitate not to charge a dollar per bushel, and get it too.

Trusting you may get the fruit safe, I remain truly, JAMES H. WATTS. *Rochester, March 8, 1852.*

The apples were received in perfect order, and our correspondent will please accept our thanks for the beautiful pomonal display. The Northern Spys, (for which Rochester is the meridian,) were the handsomest specimens—and very sprightly and refreshing in flavor. The Canada Red, or old Nonsuch of New-England, is, to our taste, one of the finest of apples—really superior in flavor to the Northern Spy. Its merits as a dessert fruit, have long been known, but in New-England and Long-Island, where it has been most cultivated, it is rather a shy bearer. In Western New-York, it is, we believe, quite prolific, and we certainly know few apples better worth planting, in a rich, deep soil, than this variety.

The specimens of *Swaar* and *Spitzenlergh*,

were very handsome—but not so high flavored as the same sorts grown on the Hudson.

TAN ON STRAWBERRY BEDS.—A. J. DOWNING—Dear Sir: From what has been published in the "Horticulturist," of the good qualities of tan-bark to cover strawberry beds, I have tried it on mine this winter, and now I wish to ask what is done with the beds in the spring? Is it necessary to remove any part of the tan, as this would be a difficult job. I first gave my beds a good top dressing of old compost manure, and then the tan, but not so thick but what the tops of the plants have always been in sight, (when the snow was off.) If all the tan is left on the beds, will it not prevent this year's runners from taking root? Respectfully yours, T. P. *Waltham, Mass., March 9.*

Leave the tan on all summer, say from one to two inches deep. It is only necessary that the heart or crown of the plant should be exposed when growth commences. The runners will strike roots through the tan. Ed.

EARLY GRAPE CROPS.—Dear Sir: I feel gratified that my article on the grapevine, in the Horticulturist of last month, has aroused at least one of your numerous subscribers. I was not aware that it amounted to such paramount importance as he assigns to it, and do not consider that I have done more than has often been performed before, and that without injury afterwards, under good treatment. As to the doubts and fears of Mr. CLEVELAND, they go for what they are worth. It is well known that the grapevine can be brought to healthy and permanent bearing in less time than four years. I sincerely hope that his invitation to grape growers, generally, will meet with a hearty response, for no one more than myself, wishes to see this valuable boon of nature brought to its greatest capabilities; but if we are to derive any really valuable information for our guidance, our various operations in detail should be recorded, our success and failures alike registered, so that the sure test of public opinion may pass its verdict, and we may be benefitted, generally and collectively. It was no self-glorification on my part that caused me to give my practice as in that article detailed, but a wish to encourage the erection of graperies and the cultivation of the grape vine, and if it will lead to further and

better experience being recorded, my most sanguine wishes will have been accomplished. Perhaps if Mr. CLEVELAND had taken up the same space that he has occupied in describing his working, instead of expressing so much opinion, it might have been of more general benefit, for "our judgments like our watches, none goes just alike, yet each believes his own." Suffice it to say, that my ideas in cultivation are not the mushroom aspiration of yesterday, but are founded upon the experience of twenty-five years close observation, and practical application of the laws of nature, and whether success or failure be my fate in the present case, your correspondent shall have it faithfully recorded to amply satisfy him, but for the present my motto is "nil desperandum." I am yours most respectfully, Wm. CHORLTON. *New Brighton, Staten Island, March 10, 1862.*

EFFECTS OF THE HARD WINTER.—MR. DOWNING—Dear Sir: We have had an unusual cold winter here, destroying every peach bud west of the mountains. As far as I can learn, the crop is entirely destroyed in Ohio, Indiana, Illinois, Missouri, and Kentucky and Tennessee. The fall season was very mild, having no cold weather till the 22d and 23d of December, two very cold days, thermometer down to eight degrees below zero, lower by two degrees, than I have seen it for 18 years past. On examining peach buds they were not injured; we had another cold interval on the 12th and 13th of January, but not so cold; no buds were hurt, but the next fall of temperature, on Monday the 19th, brought intense cold. At daylight on the morning of the 20th of January, the thermometer stood at 18 degrees below zero, but I supposed it had been much colder through the night, which killed every peach blossom bud, not leaving one, and nearly all the heart cherry blossom buds and fine plums are destroyed, except a few kinds—Damsons which are not hurt, nor Morello cherries; it has been stated by close observers, that the germ of the peach blossom buds would perish at 14 degrees below zero. I never believed it before this winter, as I knew peaches were raised north where the thermometer frequently went down to 80 degrees below zero; but I now suspect whenever the thermometer went below 12° or 18° below zero, the buds were killed. I don't suppose it would be

of any benefit to us, but it would be a satisfaction for us to know, precisely what degrees of cold the peach bud will stand. By collecting some facts, we might ascertain, very nearly, the degree of cold peach buds will bear. I think if you would collect all the facts you can, and publish an article in the May or June number of the Horticulturist, I feel very confident it would be interesting and valuable. The peaches west of the mountains, and north of 37 degrees latitude, are all destroyed. If you would make a memorandum of the range of the thermometer of the different places, and next summer compare the thermometer, and places where peaches bear, we may ascertain very nearly what degree of cold they will stand. I give you the lowest fall of thermometer as far as I know:

	Below zero.
Cincinnati and southern Ohio,.....	13
Pittsburgh,.....	15
St. Louis,.....	20
New-York,.....	7
Columbus, Ohio,.....	20
Zanesville,.....	27
Baltimore,.....	5
City of Washington, ..	2

The above was all on the morning of the 20th January, at daylight. The buds were in perfectly good condition to stand the lowest point of depression of the thermometer, as the fall and winter had been very dry, and the wood was perfectly matured; at the time of extreme cold, there was no sleet on the buds, and had been no thaw to excite the sap.

A few days since I learnt from a friend in my neighborhood, that it was much colder on Monday night, January 19th, than I had supposed; this gentleman was a distiller, and was up through the night watching his pipes from freezing, and found the thermometer down to 21 degrees below zero, between one and two o'clock in the morning of the 20th January, and had risen to 18° below zero at daylight, which exactly corresponded with my own; it is thought the coldest weather ever known in this country.

I should like to see some information in the Horticulturist, in regard to the effects of the winter on fruit buds east of the mountains, in New-Jersey, and Western New-York. It would be very interesting to all persons interested in fruit culture, to see a statement in the Horticulturist, of the lowest degree of thermometer, from various parts of the country.

Such information might be easily obtained of each subscriber of the *Horticulturist*, by giving notice of such request in the next number, post-paid. It would certainly be quite interesting to the readers of your valuable *Journal*:

Cherries of the fine kinds, will not stand this climate, unless the body of the tree is protected with straw, to keep the sun from the tree. A board should be set on the south side of the stems in summer, and well wrapped round the body in winter. With this care they do finely; otherwise, it is better not to plant. The only kinds, out of some 60 varieties I have, that are not killed in the bud, are the following:—Mayduke, Belle de Choisy, Late Duke, Black Eagle, and Holman's Duke. The latter is one of the hardiest, fruit and trees, I have—earlier and finer than Mayduke—bears abundantly, and is excellent.

The buds of our fine Plums are generally killed, except the following:—Peach Plum, unhurt, stands this climate first rate. Corse's Notabene, as hardy as a Damson, and very fine. Sharp's Emperor, Downton, Imperatrice, Bleeker's Yellow Gage; Coe's Golden Drop stands any degree of frost here—and the Jefferson, too, which is altogether one of our very finest plums. I think the apples and pears are not injured as yet. The weather is as balmy as May, to-day; frost all out of the ground, and quite spring-like. Yours respectfully, JOSEPH CLARK.
Lewis, Brown Co., Ohio, Feb. 28, 1852.

The state of Ohio seems to have suffered more from the excessive cold of the past extremely "hard" winter, than any part of the country. The peach crop here is wholly destroyed in some places—but has quite escaped in others. Wherever the thermometer has fallen 12° below zero, the germ peach bud is destroyed—but, as usual, the orchards on the hills have escaped, while those in the valleys have suffered.

We shall be glad to have accounts from all parts of the country, of the precise effects of the past winter—admitted, we believe, to be the most severe for 40 years. It will be interesting to ascertain what plants and trees have suffered most; what have been destroyed; and the soils and sites that have best preserved the trees, &c., growing on them. It is singular, that young trees in the nurseries have suffered far less from the effects of the cold, the past winter, than

they did from the freezing and thawing of the previous one—though a mild winter. Antwerp Raspberries, after being killed by a mild winter, appear perfectly uninjured, where they have been left without covering, in our garden.

THOROUGH DRAINING THE SOIL.—Mr. DOWNING: Having, since the commencement of your *Horticulturist*, derived from it many valuable hints for the culture of plants, I will hazard giving you a history of an experiment made by me in this city, in hopes I may in some measure reciprocate. In October, 1849, I commenced my house, number 1 Madison Square, north, and after the roof was on, say June, 1850, I hired an old gardener to prepare my lot for a garden, in *my own way*. It was only after much conversation, that I could persuade him to follow my directions; and after consulting some of his fellow gardeners, who had heard that I knew something of Horticulture, and finding that I was determined, he put himself under my direction, being very careful to warn me that he could not be responsible for the failure that must ensue.

He then, with carts, took away the top, consisting of clay, sand, and other rubbish, four feet deep of the entire surface of my lot; he then placed all over the bottom, stones of all sizes, thrown in carelessly, but as level as possible, about twenty inches deep. Over these he put quite small stones, and the screenings of building sand, filling up all the holes, and covering over the larger stones about six inches. The remaining part was then filled with a fine sandy loam, every load of which I inspected personally. While this was being done, a crowd of curious people watched our proceedings, and all, (*with no exception*,) pronounced it worse than useless—bad in every respect, and calculated to kill the plants by drouth in summer.

I confess I was rather shaken in my determination, when some of my friends, amateur horticulturists and gardeners, in whom I place great confidence, gave their opinions, that "having the free use of the Croton water, I might keep my plants *alive* through the hot weather;" but as I had some reasons I thought good, for commencing, I concluded to carry it through, and I laughingly told them, that I hoped to avoid the very evils they feared, by thus draining the soil.

The ground was finished in August, 1850; it laid until the house was completed, March, 1851, when I commenced planting. My plants were selected mostly from the stock of the gardeners in the vicinity. During March and April, I planted about six hundred trees and shrubs; a great proportion of them were roses—imported French grafted stocks—(but many were on their own roots.) I used no other manure during the season, than a bag of guano, put in with a trowel some distance from the roots, after the plants were in full foliage. I lost, in all, not over six plants—and although it was the first season, I never saw such a growth of wood and such succession of flowers, either in city or country. Your friend, Dr. A. G. HULL, visited my garden one day in July, and appeared much pleased, as I explained to him the cause of such growth and flowers, which he declared he had never before seen. You will recollect the excessive drouth we had last fall, enough to try my experiment thoroughly in that way. The result was in this respect, too, perfectly successful, more than I had ever hoped. I used the Croton water much less than my neighbors, whose soil was dry as powder, and could not absorb the showers that so seldom came, while mine drank easily all the rain or water, as it fell. It percolated through the earth, down among the stones, and as the hot sun heated the surface during the day, it returned at night in vapor through the soil, refreshing the roots of the plants. This action was so perfect, that at the driest time you might have found moisture in my soil, at the depth of two inches. The old gardeners now consider me a master in horticulture, and all admit the benefit of drainage in summer, which was all I hoped to prove.

I left out all my roses on their own roots, without any covering whatever—such as *Devoniensis*, *Safrano*, *Triumph de Luxembourg*, &c, and at this time they appear in good order, though the winter has been far from a mild one. I do not hope to save all these; but if a fair proportion should be saved, I shall be satisfied that I have proved that effectual drainage will supply plants with moisture in summer, and take away the surplus from the roots in winter—thereby giving them a chance to live through heat and cold—when without it they might die. W. W. LIVERMORE. *New-York*, March 3, '52.

PRESERVATION OF GRAPES.—Dear Sir: I enclose you a recipe for the preservation of grapes, as given by my friend Dr. BLATCHFORD.

I ate some of his grapes a few weeks since as fresh and as luscious as if they had not been more than a few hours from the vine. Very respectfully yours, J. H. WILLARD. *Female Seminary, Troy*, March 17, 1852.

You was pleased to make mention of some fresh *Isabella* grapes I sent you the first of this month. To-day we have eaten the last of fourteen boxes, each containing between one and two pecks of fruit, which I put down in October last. They retained their plumpness (except here and there a bunch which appeared a little withered) and their delicious flavor, very nearly, if not quite equal to what they possessed in the time of gathering. In most of them the stems had not lost their verdure. The luxury of having *Isabella* grapes not only all winter in great abundance, but so late as the middle of March, is worth enjoying to all lovers of that delicious fruit. The experiment having been so successful, and the method of preserving them so simple, many of my friends have asked me to describe the process for their benefit. I have done so, and now send it to you for publication if you feel so disposed, that the benefit, if any, may not be confined to a limited circle.

In July and August I procured a quantity of ash saw dust from Messrs. Eaton, Gilbert & Co.'s coach and rail car manufactory. Ash, because it imparts no taste to the grapes and because it is usually obtained dry. I then sifted it to get rid of the fine powder which heretofore I found difficult to remove from the grapes when taken out for use. After thus preparing it, I kept it under cover until I wanted to use it, when it was sufficiently dry. When the grapes were fully ripe in October, I picked them and immediately packed them away in boxes, (old soap and candle boxes, without covers,) putting in first a layer of saw dust about half an inch thick, then a layer of grapes in bunches, the bunches as close together as they could be placed without bruising them; then a layer of saw dust just thick enough to cover them, and so alternately a layer of grapes and saw dust until the box was full, the boxes containing four and five layers. After packing them I piled the boxes one on top of the other, the bottom of one box forming the only cover of the one underneath. I kept them in one end of my wood-shed (enclosed) until it became freezing weather, when I removed them to the cellar in the same order. None of them have been mouldy, none of them musty. In removing them from the boxes for use, all that we found necessary by way of cleaning them, was to use a small dust-brush, which very soon removed every particle of saw dust and left them at once fit for use. Yours sincerely, THOS. W. BLATCHFORD. *Troy*, March 15, 1852.

REMARKS.—We are much obliged to Mr.

Willard. The ash saw dust is excellent, but we fear in most cases the use of *candle* boxes, would impart a disagreeable flavor, having had many samples of fruit sent us, of which we were unable to judge at all, simply from their having been packed in candle boxes. Other boxes are easily substituted. Ed.

PRIZES IN HORT. SOCIETIES.—MR. DOWNING.—I have read with great attention the article "on the prizes at the horticultural exhibitions of Philadelphia," by a Working Gardener. I agree with him, that if gardeners would interest themselves a little more (in acquiring first) in diffusing a knowledge of the culture of plants, no doubt that it would promote a more general taste for horticulture; but if, there is the rub!—first, the ninety-five hundredth part of gardeners, whatever countrymen they are, are *only gardeners by name*, and when by chance half of the other five hundredth fall in with a gentleman who has any taste for plants, they will soon disgust, satiate him by glutting his green-house with weeds, or pretty near the same, the most common sort of plants that are easily propagated and taken care of. If there are any valuable plants on the premises, they will treat them in such way, that in a short time they will send them to the shades, or make such hideous objects, probably hop-poles—specimens grown by the yard or the like; yet you will hear these gardeners complaining that there are "no amateurs." Amateurs of what? In fact, a person must be flower-mad to admire such plants as are daily seen, not only at the Philadelphia shows, which I think your correspondent has a little exaggerated, but in most of private and public establishments through the country. The comparison he draws between Chiswick and Regent's Park shows and Philadelphia, is not quite rational; in good justice we are not here placed in condition to ask as much of a gardener as in England. Still, though the *Hamburghs are red*, there are some Americans who have grown grapes handsomer than the "Working Gardener" has ever seen either in England or France, or any other part of Europe. I have not seen the former place, but I have seen some parts of the latter, and nowhere have I seen grapes there, half the size and beauty of those I have seen in America. Now will your correspondent permit me to ask him one question; he says "that in England it is art

combined with nature, that shows man's ability." In this respect we perfectly agree; further he says, "nature produces grapes, but in England it is man's ingenuity which produces the coloring matter in fruits." This may be, but if so, if British gardeners have so much ability, so much genius, are so well acquainted with the laws of vegetable physiology, how is it that in this country, favored by a *fertile soil, a bright sun, and a clear sky*, they cannot do half-half—not a quarter of what they do there? Yet I think that a majority of the gardeners in America are British; are the same men who at home, in the old country, draw enough heat from the sun to produce the coloring matter, etc.

Speaking of the inducements given by the horticultural society, and of the arrangements being too limited in each class class, he complains of the society's allowing amateurs to compete with nurserymen; that one who grows a small number of plants has no chance to compete with a nurseryman who has thousands. In this respect we widely differ. I, on the contrary think, he who grows a small collection has more chance to get good specimens, inasmuch as number is not required, but quality; there is no distinction in what is regarded "*the best collection*," leaving you at liberty to exhibit what kind of plants you like. I think this is perfectly right; you are at liberty to exhibit what plants you choose, but the society and the committee are also at liberty to judge whether your plants are the best or not. "I exhibit a few green-house plants and they may be good, but another who has a little more convenience than me, may add an exotic or two, or an orchidæ, and if so, my plants are thrown in the shade." Please tell me Mr. Working Gardener, what is it you wish more just, that the best collection should take the prize? Do you wish that it be the worst? or do you think that the addition of an orchidæ makes the number of plants required for competition look worse? Must the queen of plants be an object of exclusion to competition?

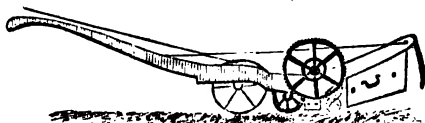
I thought you said gardeners ought to promote the love of flowers, the diffusion of knowledge, &c? Do you want devotees to Flora to admire only your *Pelargoniums*, grown in 6, 8, 10, 12 inch pots?—in all sizes of pots from two inches up to a hogshead, and so for the rest—12 pri-

zes for Pelargoniums—only that! My dear sir, I think you are a Pelargoniomane. What a pretty, well varied collection of plants it would be, that—all your Pelargoniums in all sized pots, when you are asking for a reform in the schedule, &c. You ought to ask the exclusion of all the plants you don't mention—that is to say—all but Pelargoniums; for if Orchids don't suit you, I suppose that well grown Ericas, Epacrises, Boronias, Ixoras, Clivise, Acacia pulcrum, Vettiis, &c., *Æschynanthi*, *Rondeletia*, &c., would still please you less—for devotees to flora, of your school, could not easily get them; at least, it is what a gardener friend of mine, says. I conjointly, with you, feel convinced “that if gardeners had means of suggesting their ideas before the Horticultural Society of Philadelphia, and that their ideas being similar to yours, &c., should be adopted,” Pennsylvania might change its name for the more appropriate one of Pelargoniosylvania. As for the rest of your remarks, I cannot too loudly say that I agree with you. I am with you, body and soul. Those “Floral designs”—I would call them *Floral monstrosities*—as well connected with horticulture, as temperance is with drunkenness, truth with falsehood, or rather connected in this way—that horticulture has for its object, to improve the culture of plants and Floral designs; to disgust with Flora any person of taste.

Committees award premiums of 2, 5, and 10 dollars, for such designs, that not one of its members, that had a party at his own house, would exhibit in his room, if he were to receive ten times the amount he awarded for such a design. In general, the societies pay, in proportion to the articles exhibited, the highest premium to the most unworthy thing; for instance—a person brings half a dozen Verbenas, and half a dozen Pansies, in the crown of his hat, and he gets 1, 2, 3 or more dollars. Another, 10 or 12 plants that have taken 2 or 3 years to grow, and you want a horse and wagon to carry them, and he gets 2 or 3 dollars. There is certainly alteration required in this respect. If, however, horticultural societies have really in view the improvement of all the branches of horticulture, and if Mr. DOWNING would be our LINDLEY—not in anglicising, or rather murdering the botannic names of plants, such

as Dendrob for Dendrobium; an Angræe for Angraecum; a Lechenault for Lechenaultia, &c.—a reform as useful for the diffusion and intelligence of botany, as—excuse the comparison—as a poultice on a wooden leg. But, in allowing us lovers of horticulture and botany to communicate through the channel of the Horticulturist, no doubt, that in the course of time, we could bring a reform in the arrangement of the horticultural societies throughout the country, instilling the emulation of cultivators and amateurs, in making a wiser distribution of premiums; in giving a chance to the most humble grower, as well as to the most refined amateur. Yours most respectfully, &c., A LOVER OF FLOWERS, and A Working Man, too. *Albany, Feb., 30, 1852.*

MOWING MACHINES.—Dear Sir: I seldom see anything used but the scythe, in mowing lawns in this country. Now garden labor of all kinds is so dear here, that the mowing machines used in Great Britain, (which I noticed you spoke highly of in your letters from England,) would be particularly valuable in this country—both as saving labor and expense, and I may add, doing the work far more neatly than most of the ordinary mowers and gardeners. I have not used the lawn mowing machine in this country, though I have abroad, and I believe the American mowing machine is only adapted to the hay-field—quite a different thing from lawn mowing—which must be done like cutting velvet. I send you a cut and description of one of the English mowing machines, in the form of an advertisement, which very fairly describes the instrument, and may introduce it to some of your readers who will be benefitted by the information. Your obedient servant, A MONTREAL SUBSCRIBER. *March 10, 1852.*



Shank's Improved Grass Cutting and Rolling Machines.—The complete success which has attended the introduction of this machine for mowing grass, and its fine adaptation for cutting the grass of lawns, has been fully proved by the numerous instances where it has been tried, and now in common use, particularly at Rossie Priory, Camperdown, and Kinblethmont, Forfarshire; Breadalbane, Perthshire Clum-

ber, and at many other nobleman and gentleman's, seats in England, as well as abroad. The machines are made to cut breadths of 42, 30 or 20 inches, as required, the latter being adapted to hand power. The machine performs three different operations at one time, viz: rolling, mowing, and collecting the grass; and works with perfect ease, producing a beautiful smooth surface, and attended with great saving in abridging labor.

Orders may be addressed to Messrs. Alexander Shanks & Son, Machine Makers, Arbroath, N. B., by whom further particulars will be given.

Sold by Messrs. J. & F. Dickson, Nurserymen, Chester; Messrs. J. & C. Lee, Nurserymen, Hanumersmith; and Mr. George Barry, Nurseryman, Castle-street, Liverpool.

PLANTING ORCHARDS.—The following on the subject of "orchard planting," should you deem it of any importance to your readers, may be inserted in your valuable paper. The growing of fruit should be a source of pleasure to every farmer, and would be a source of great comfort, health, and profit, at the expense of but little time, attention and labor. The time and application required, to grow the very best fruit, need not materially interfere with the business of the husbandman. It is the little attentions the young orchard receives before sunrise in the morning, and after sunset in the evening, that ensures a speedy and profitable return. The labor, after your orchard is once planted, is comparatively trifling; and indeed there can be no excuse for any individual, who pretends to be a "tiller of the soil," not having an abundant supply of the best fruits upon his land.

In travelling over a great portion of Western Pennsylvania, you will find scarcely one good bearing orchard to the square mile; this is accounted for by some, that their land is not suitable for fruit, and by others, that they have tried orchard planting, but found after waiting many years, a majority of their trees were dead and destroyed, and what few remained produced but a meagre crop, and of the poorest quality. The conclusion, therefore, most generally arrived at is, "that there is no use trying to raise fruit; it takes too much time and attention, and in the end pays but little."

My desire is to show that every farmer may, in the short period of from three to seven years, be reaping the rich fruits of an orchard, in a

fine, healthy, bearing condition; producing him a profit greater than any other crop, and with the least labor. The *modus operandi* is as follows: Select the spot for your orchard, having an even surface—if a little elevated the better—and having also, if convenient, a south-eastward bearing. If the land selected is good, the less preparation will be required. Surround it with a good, close, and substantial fence; and if necessary, to prevent depredations, plant a hedge of the Osage Orange in the inside of your fence, which in a few years would prove a most complete protection. In the fall of the year plough and trench-plough the whole, having first applied a copious coating of stable manure; the next spring pulverise with a heavy harrow, and again applying a heavy coating of long manure, plough and subplough to the depth of sixteen inches, if possible, then harrow well and plant in potatoes. This crop itself will pay the expense of preparation.

After your potatoes have been taken up, which may be a little earlier or later than usual, plow, harrow, and mark out for your trees; for apple trees, forty feet distant, in squares or pentagons, and between each mark for peaches; and, having selected healthy seed, and peach nuts from healthy trees, plant alternately, eight or ten in a hill, applying some well rotted cow droppings or compost, and placing a small stake to each hill.

In the coming spring, a majority of the seed will germinate, and being thinned out to four or five in a hill, must be carefully cultivated, and kept clear of weeds during the season. The ground should be again planted in some hoed crop, care being always had not to plow within four feet of the hills of your fruit trees; in July or August, your young trees are ready for budding, which must be done from the best selections, and early in the mornings, or after sunset in the evenings; carefully recording in a book kept for the purpose, the names of your varieties—and here we might say your *work* is done. The spring following, the hills are to be again thinned out, leaving two of the most vigorous buds—and if there are any vacancies, supplying the same; continue to cultivate hoed crops, as before, and keep the ground about the plants, loose and clear of weeds. In the next fall or spring, select the more vigorous and

healthy tree in each hill, and remove all the others; your standards will then be from four to six feet in height, and strong in proportion. In one year more you will have an abundance of peaches, and in four years your apple trees will produce a bushel of fruit each. In eight or ten years your peach trees may be cut down or taken out, and you have an apple orchard to be proud of.

The advantages of this mode of planting over all others, must be evident without enumeration; however, if your readers should desire, I would be pleased to set them forth, in a continuation of this article. B. B. Pitt Township, Alleghany Co., Pa., Feb., 12, 1852.

HYACINTHS.—Among a small collection of choice Hyacinths, forced the past winter, in glasses, in a common room, I had one that I deem worthy of note. It was a *Grand Vainqueur*, or single white, and had fifty-five distinct flower bells, growing on a stout stalk of a foot in height. For water growth this was extraordinarily fine. F. HALL. Elmira, March 18, 1852.

PENNSYLVANIA HORT. SOCIETY.—The stated meeting of this association was held at the Chinese Saloon, Philadelphia, on Tuesday evening, February 16, 1852. E. W. Keyser, vice-president, in the chair.

The display was exceedingly beautiful, and was composed of the finest green-house plants in bloom. The collection from Joseph Ripka's was unusually rich, comprising *Rhododendron maximum*, a fine tree in its proportions, being about 12 feet in height, and bestudded with numerous trusses of magnificent flowers; *Azalea indica alba*, a very large plant, throwing out an immense number of pure white blossoms—also three other *Azalea* trees, in the fullest flowering condition, with roses, stocks, etc. From Caleb Cope's houses were seen three very large *Azaleas*, of different species, presenting great masses of flowers, dazzling to the sight, and *Eriostemon nereifolium*, a new plant, and well grown specimens of *Plumbago rosea*, *Lechenaultia formosa*, and the fifty-third flower of the *Victoria regia*, very perfect; also a handsome large moss vase, and basket of cut flowers. From Robert Buist's, there was a collection of the choicest plants, several of which were new, and shown for the first time; the *Rinchosper-*

mum jasminoides and *Diclytra spectabilis*. Benj. Gulliss exhibited a beautiful collection, mostly Roses, Camellias, Heliotropes and Hyacinths. From Robert Cornelius' houses, a pretty collection of Roses, etc. James Ritchie exhibited a table of the most select Camellia flowers.

Of fruit, there were dishes of the "Reading" winter pear, from J. F. Boas, Reading, Pa., and Ridge Pippin apple, from Mahlon Moore, Bucks county, Pa. A table of forced vegetables were shown by R. Cornelius' gardener, and forced Lettuce, Radishes, &c., by Miss Gratz's.

A letter from Dr. John Dawson, of Rangoon, Burman empire, a corresponding member, was read.

A dissertation from R. Robinson Scott, gardener, showing the superiority of the natural system of Botany, over the Linnæan, or artificial, was read.

Professor Hare addressed the society on the subject of Horticultural Chemistry, throwing out many useful hints of a practical nature, to the cultivator.

A committee was appointed to make arrangements for the ensuing meeting of the American Pomological Congress. Adjourned. THOS. P. JAMES, Recording Secretary.

HORT. SOCIETY IN NEW-YORK.—The friends of Horticulture held a meeting at the Stuyvesant Institute, on the 22d March, for the purpose of forming a Horticultural Society. On motion, R. L. PELL was appointed Chairman, and George W. Curtis, Secretary. It was resolved that the Society be known as "The Horticultural Society of the City of New-York," and a constitution and a code of by-laws were adopted. The committee appointed at a previous meeting to select officers for the ensuing year, reported the following, and they were unanimously chosen:

President—ARCHIBALD RUSSELL. Vice-Presidents—William H. C. Waddell, William A. Haynes, Nicholas R. Anthony and Sheppard Knapp. Rec. Secretary—George W. Curtis. Cor. Secretary—Peter B. Mead. Treasurer—William W. Crane.

Mr. Russell declining to act as President, the committee asked further time to enable them to make a suitable selection. A committee of five was appointed to make out a list of premiums to be awarded at an exhibition, which it is proposed to hold about the 20th of May. Many of our first citizens have already enrolled their names on the list of members of the Society, and there is every reason to believe that the movement will be successful.—N. Y. Times.

THE CHESTER COUNTY (PA.) HORT. SOCIETY held its first monthly meeting for the year 1852, on 20th March, at which time the following named officers were elected for the ensuing year:—

President—WASHINGTON TOWNSEND *Vice-Presidents*—Paschall Morris, Ziba Darlington. *Treasurer*—John Marshall. *Cor. Secretary*—Joseph P. Wilson. *Rec. Secretary*—Isaac D. Pyle.

Jonathan C. Baldwin, the late President, having declined a re-election, a resolution of thanks was voted, complimentary of the manner in which he had discharged the duties of his office.

Answers to Correspondents.

LIME ASHES.—C. H. Perkins, (Ascutneyville, Vt.) Lime ashes, which usually consist of wood ashes and lime in about equal parts, are excellent for compost heaps to be used for fruit trees—better than leached ashes—provided they do not contain magnesia. Limestone that contains so much magnesia as to be injurious, will not effervesce rapidly when sulphuric acid is poured upon it. Mr. ANTISELL, chemist to the American Institute, N. Y., or Prof. MAPES, of Newark, N. J., will examine a specimen, and inform you of the proportion of lime and magnesia, for a small charge—say \$5. The best way of composting the lime ashes is to mix it with five times its bulk of black muck.

WASH FOR BARNS.—A Constant Reader, (Maryland.) Take hydraulic cement, 1 peck; freshly slacked lime 1 peck, yellow ochre, (in powder,) 4 lbs., burnt umbra 4 lbs.; dissolve the whole thoroughly in hot water, and apply with a whitewash brush. Window shutters, for a “rough cast house, left the natural color of the mortar,” may either be dark green, or light brown. If the slats of the shutters are painted a light brown and the borders or frames of the same, two or three shades darker, the effect is good.

EVERGREENS.—Ibid. Take out one of the leaders of the Norway Spruce. The best time to prune evergreens is at mid-summer, but small limbs may be taken off now. You may prune trees at any time, if you use the *shellac* solution recommended, in our “Fruit Trees.”

BOTANY.—A Mass. Subscriber. The natural system is considered superior to the artificial, but the latter is much more easily mas-

tered by beginners. We would commend to you as a first hand-book, by which to become acquainted with the Flora around you, Eaton's Manual of Botany. Then take up Gray's Botany of the northern and middle states. No person who loves nature, and lives in the country, should neglect to become sufficiently acquainted with botany to find out the names and history of every plant he meets.

STRAWBERRIES.—B. Arnold. Your bed was planted on soil too much worn out. Make a new one at once, in a part of your garden where strawberries were never raised, and to make sure of success trench in a large supply of stable manure, 18 inches *below* the surface. To succeed *best*, the strawberry roots should be encouraged to go down deep in search of food. The best varieties for your purpose are Hovey's Seedling, Early Scarlet and Burr's New Pine. W. B., (Astoria, N. Y.) The best way of getting a good crop on your old bed, is to give it a good top dressing of poudrette immediately. The Lodi works, N. Y., will supply you with a good article.

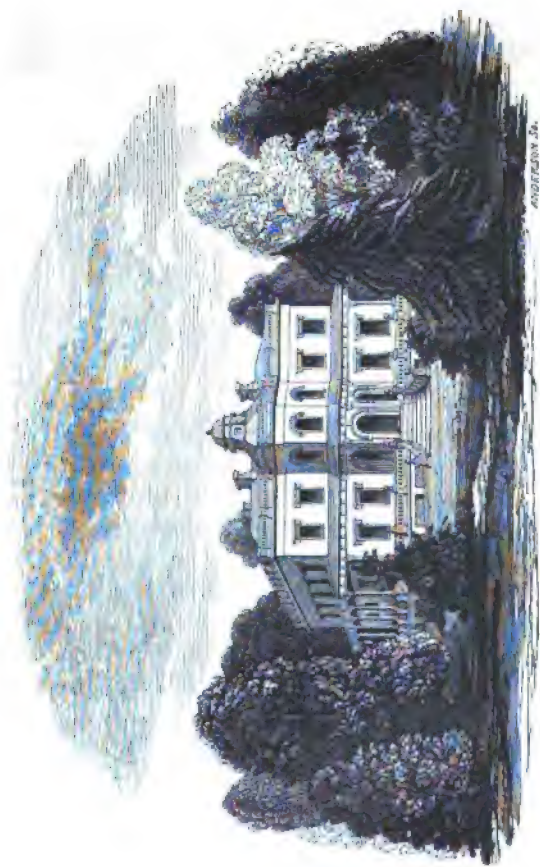
FLOWER BEDS.—A Lady, (New Bedford.) Discard all your miscellaneous flowers, and fill your beds with verbenas, scarlet geraniums, salvias, and Petunias. They will stand the sun and dry weather, and make your garden gay at all times.

IMPORTED TREES.—B. P., (Philadelphia.) If the trees are much dried up, head back the ends of the shoots and bury them, root and branch, for a few days in sandy soil. They will soon absorb moisture and become fresh again—then take them out and plant them just before a rain.

TREE SEEDS.—R. Johnson. Tree seeds kept till this spring, (that should have been planted in the autumn,) may be made to grow more certainly by soaking them for a couple of hours in water, in which you can just bear the hand, and then sprinkling them, *very thinly*, with newly slacked lime, just before planting them.

MULCHING.—*New-Bedford Subscriber.* Spent tan-bark is one of the best things to mulch the surface of the ground, over the roots of your newly planted Norway Spruces. Your mode of planting them is a good one, and you may cover the ground two inches deep with tan.





Memina, a Country Seat on the Hudson.

Hon: May, 1882.

THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE.

Brown Houses and Lightning Conductors.

WHERE are fashions in all things, and so far from underrating the importance of imitation as a means of improvement, we are inclined to value it for all it is worth. Many a man who would never be led to make any progress in mental, moral, or social culture, for the intrinsic value of these things in themselves, is induced to do so because he finds others considering them essential. The powerful, original, inventive minds lead; the merely imitative and dull are content to follow. The misfortune is, that in following, they often lose the spirit, and pertinaciously adhering to the letter, they blunder into errors, sometimes more ludicrous than those they seek to cure.

We are led to these remarks by observing how, when the absurdity of an old idea is pointed out, and it begins to be abandoned by those who think and act first in such matters—those who think and act from some principle—it is often taken up and carried to excess, by those who see or understand no principle at all, but merely adopt it because it is the fashion to do so.

An amusing example of this is the rage now in vogue in New-York, for painting all dwellings of a dingy brown color—"Victoria brown," we believe the painters call it. It so happened, that along with the building of Trinity Church, in New-York, some ten years ago, sprung up quite a new and improved taste in architecture. This grew partly out of the novelty of seeing, for the first time, a really good church built of solid stone, the beautiful details of which were finely executed in the comparatively soft sandstone used in that building, and also from the fact, made manifest by the extensive use of that material, that the beauty resulting from enriched architecture, a thing almost impossible in cold, hard granite, was not only possible, but delightful in a more pliant material. Captivated by the use of a building material in which edifices no longer frowned in the sternness of gray rock, but smiled in the softness of "freestone," granite and bricks were almost abandoned, and churches,

shop-fronts, and private dwellings, with solid-looking façades of this brown stone, have sprung up all over New-York, as if by magic. It is undeniable, that the use of this stone has amazingly improved the character of the buildings, both public and private, that adorn all the newer and better portions of the city; for there can never be any comparison instituted between the expressionless brick walls that formerly made up all of New-York, (and that still make up all of Philadelphia and Baltimore, and the more expressive and architectural effects that have grown up since freestone has come into general use. Architecture, like sculpture, demands *stone* before it can develop and blossom in all its fair proportions—and dull and monotonous as much of the brown sandstone* used in New-York, is, we owe to its greater facility under the chisel, the only just pretension to architectural beauty, that any of our cities have yet made.

So far, it is all very well. There is something real in the color of any stone, and therefore, in a certain degree satisfactory, because it is the natural color—though the stone may be by no means the best one.

But now comes the imitation—the false instead of the real—the paste instead of the diamond. Brown stone houses are the best houses in town—therefore they are the fashion. Now, unfortunately, there are many brick houses that cannot by any conjuror's wand be turned into brown stone. Still, the owner is very unhappy, not to live in a brown stone house—it is such a miserable thing not to be *à la mode*. What is to be done? The house painter is the only man who alone can solve this problem. And he solves it—by *painting* his house "Victoria brown"—i. e., the fashionable dingy brown stone color, (in imitation of our freestone.)

Now, as we think few things uglier than red brick walls, we have no objection to calling in the help of the painter to impart the agreeable impression of a pleasing color, instead of an ugly one—to the otherwise insipid, meagre, brick surface. All that we complain of, is, that any body should be forced to swallow, as a quack medicine to cure all diseases that the optic nerve is heir to, this eternal, dingy "Victoria brown."

The only object of painting the surface, (beyond that of preserving it,) is to please the eye. Why not, therefore, choose a pleasing drab, or a soft, warm gray, or a light mellow fawn, or any one of the many quiet, *neutral tints*, that are as easily mixed in a paint-pot as this dingiest and most melancholy color—the color of dead leaves in autumn? Why not take two or three shades, (only *shades*, not distinct colors,) of the same drab, or gray, and by painting the body of the house one shade, the window-dressings and the cornice another, and the blinds another, give some pleasing variety of expression, (for color alone is capable of doing wonders in this way,) to our otherwise monotonous meagre piles of brick houses? Why not—but it is useless to inquire! The painter, shaking his "Victoria brown" brush at you, stops your mouth with that answer from which, in the opinion of the multitude, there is no appeal, "this is the color, sir, everybody prefers now."

If fashionable Victoria brown is simply an error of taste in town, it is an abomination—a miserable cockneyism in the country. But in the country it has come, (at

* We notice with pleasure, that several of the newer structures in New-York, are of a sandstone of a much lighter shade—the color of which is very handsome.

least everywhere within 300 miles of New-York,) and we, who used to put our eyes out with the everlasting glare of white paint, (with only the vulgar relief of very green blinds)—are now being “done brown”—*Victoria-ized*—(poor innocent republicans as we are)—simply because Trinity Church was built of brown stone, and some ignorant *John Bull* of a house painter took it into his head to daub over all the brick houses in Gotham, as nearly like brown stone as he could make them.

Seriously, we protest against this snuff-colored mixture, with which all our dwellings, good, bad, and indifferent, are likely to be painted out of existence—for “Victoria brown” is a most suicidal, melancholy color. There are, to be sure, many houses so little calculated to awaken any emotion but those of wonder as to how they came to be built—houses that we would like to see deeply dyed of some hue that would render them quite *invisible* to mortal gaze. But others there are, that the eye rests on with delight—beautiful country houses—perhaps modest cottages, with latticed porches half overgrown with the “lush woodbine,” or pretty villas, embowered in shrubbery and smooth lawns, or pleasant, rambling farm houses, seated amid blossoming orchards, or, may-hap, stately mansions with park-like meadows, studded with noble groups of that loveliest and most graceful of all American trees, the Weeping Elm; and for all such we implore a respite! We beg all true lovers of good taste to protect these fair homes in the country, from the rude assaults of these Knights of the Brush—these valiant *DON QUIXOTES* of the VICTORIA BROWN regiment, who go about attacking all that does not wear their color, more desperately and omnipotently than *DON QUIXOTE* of old did the windmills of La Mancha.

This is the epidemic of New-York. That of New-England has taken a widely different shape. The tendencies of our eastern neighbors always take a more subtle and spiritual direction, and accordingly, we find that while the rural districts of New-York are brown-stone-blind—or rather blind to everything but brown, the country folks down east are equally distracted on the subject of lightning rods!

We have never heard from scientific men, that New-England is a land peculiarly liable to be *struck by lightning*, (rather famous it is, generally, for *strikes* of another sort,) but certainly, any person travelling for the first time through that part of the Union, at the present day, would set it down as a fixed fact, that it was “down east” alone, that *SPENCER* could have had in his imagination when he was led to say,

The sky in pieces seeming to be rent
Throws lightning forth, and hail, and harmful showers.

Why, there is scarcely a house worth five hundred dollars in Connecticut or Massachusetts, which has not, within the last half dozen years, mounted a *chevaux de frize* of bristling steel conductors, as terrible to the eye of a lover of repose in the country, as the serried ranks of one of Napoleon’s invincible hollow squares, presenting innumerable bayonets at all conceivable points of attack, were to his enemies. A new neighbor strolling out for the first time, and encountering one of these domicils armed from top to toe with iron rods, and “presenting arms” at every angle, at the top of every chimney, the turn of every corner, yes, and at intervals of every half dozen feet where along the straight ridge of the roof there are no angles—would he not turn back with

dismay, with all thoughts of seeking hospitality at such a home driven clean out of his head?

We are at a loss to know how our shrewd neighbors of New-England have been persuaded into such a very considerable item of needless expenditure as this same hideous display of lightning conductors on every house must have cost, all over that populous country. We suppose some magician, "cuter" than the "cutest," must have waved his iron rod over them, with some potent spell of incantation, to have produced such an effect on a whole people, where the school-master is so thoroughly abroad as he is there. We have questioned and cross-questioned, and for the life of us, cannot ascertain that any greater damage is sustained in the farm buildings and village dwellings of New-York and Pennsylvania, where one lightning rod answers for a whole building, than in New-England, where it takes 50 or 100 points of the very sharpest description, shooting up into the air in all directions.

We know very well the philosophy of protection which the *savans* have laid down—that only a certain circle beyond the conductor's point of radius, is protected by that point—but, in good truth, it is but very rarely that a dwelling is struck at all—because tall trees standing near and about it, conduct away the fluid first, and any barn with a cupola ventilator, and a single high rod surmounting it, one which may be made most useful and ornamental, would be amply protected.

At any rate, we would as soon have a fire engine, with all its customary accessories of noisy boys, and red flannel shirts, and hoarsely bellowing trumpets, standing perpetually before our front door, because a fire *might* break out once in fifty years, as to have our house skewered and stuck with sharp points in all imaginable directions, because such a misfortune might happen as for the electric fluid to step out of its usual current to pay us a visit. In the town where we live, with a population of 11,000 souls, not one house in five has even one lightning conductor, and we do not remember in the whole of our life, of a single death by lightning, or one house damaged to the extent of one hundred dollars. Certainly, a wise man will not build a good house and neglect a reasonable share of precaution to guard it against possible mischance—but this hysterical nervousness of our good New-England friends, about lightning, is a mania about which they have not the less run "clear daft," than we, in this part of the country, have with that optical abomination, the "Victoria brown" disease.

THE VICTORIA REGIA AT MR. COPE'S.

BY THOMAS MEEHAN, HOLMESBURGH, PA.

Mr. COPE's success with the culture of this most gigantic of water lillies is one of the most satisfactory triumphs of American horticulture. An aquatic whose leaves measure 6 feet across, and that demands a pond under glass twenty or thirty feet across, the water in which must be kept perpetually warm and in motion, is not a plant which one person in a thousand would undertake the culture of, for the first time in the United States,

and succeed. But Mr. COPE not only succeeded more perfectly last summer in growing and blooming the Victoria, in more magnificent proportions than it has ever been grown in the finest private establishments in England, but he has, to our great surprise, succeeded in causing it to bloom superbly all through the winter. So far as we know, this has never been accomplished before, and to the fortunate conjunction of skill displayed at Springdale, and the abundance of light on this side of the Atlantic, the development of this new and most valuable characteristic must be attributed. We commend the following interesting account of the culture at Springdale, by Mr. MEEHAN, to the attention of our readers—who will not fail to notice also the liberal offer of the popular ex-president of the Pennsylvania Horticultural Society. Ed.

DEAR SIR—The interest which characterized the flowering of the Victoria in this country, continues unabated. The success which has crowned the efforts of Mr. COPE, and the abundant reward which the plant and its flowers, afford its beholders, are inducing others to attempt its cultivation. It has occurred to me that a few notes on its progress hitherto to the present time, would be interesting, as well as seasonable.

It would not be extravagant to call the beauties of this plant *unsurpassable*. Like the gigantic idea, its leaf-structure originated—the Crystal Palace—it stands among its class alone and unapproachable. Its flower has been compared to a colossal specimen of the night blooming Cereus, (*Cereus grandiflora*.) In certain respects this comparison is just; as in the general appearance of the flower, and its delightful fragrance. But when we proceed to examine each beauty separately, all comparison with any other flower must cease. It is not possible to select one property more than another, the which most to admire. It is everything to be wished for. A Victoria house is a perpetual conservatory, filled with ever-blooming flowers. Since its first flowering, in August, last, this plant has produced on an average, two flowers a week. Up to April first, there have been 58 flowers on the same plant. Nor is this ever-blooming principle one long routine of wearisome monotony, for no two flowers can be said to be exactly alike. At the appearance of every bud there is something to anticipate—some new beauty, as yet unknown, to excite our curiosity, and raise up expectation. When they expand in the evening, they may be of any shade, varying from the purest white to richest cream, till they close in the morning, as if to exhibit the change in their calyx, from a greenish to a crimson hue. Soon after the flower expands a second time, and exhibits the same flower quite metamorphosed—sometimes of the deepest pink—sometimes rich with crimson—and sometimes feathered with crimson and white, as if in playful mimicry of the delicate markings of a prize tulip. It is a strange flower—so grand, yet so accommodating! Promise a flower to a friend; he comes; the bud is only there. He is much disappointed. The occasion was an especial one—a marriage festival, perhaps, not perfect without the presidency of this queen of flowers. He shall at any rate have the bud. It is cut and placed in a box, with a little warm damp moss and a heated brick, and the top covered over. He reaches home, and the box is opened, and a perfectly formed flower lies exposed to view! What can be more magical? Verily, nature in the Victoria, throws the tricks of Monsieur HEBERT, described in your last, far into the shade.

Nor does this ever-blooming, ever-changing property, alone render it so admirable. The odor of its expanding buds, is in itself a treasure. A whole house crowded with blooming *Olea fragrans*, would not excel one bursting Lilly flower.

In a physiological point of view, the flower is no less interesting. Few plants better show the influence which light has on vegetation. When the plant here was in the most advantageous conditions in this respect, last fall, the leaves averaged about six feet in di-

ameter. About six weeks ago they seemed to have declined to their minimum size—being then three feet eight inches. Now, as the light increases, the leaves exceed four feet. When there is abundance of light the leaves turn up at the edges—in winter they lose this peculiarity—they now seem to be resuming it.

Our plant delights in a water temperature of 85°—below 80° or above 90°, an injurious effect is, at this season, perceptible.

I am informed that in England, they durst not keep the water temperature higher in winter than 60° or 65°. This must be owing to the short supply of light to an English winter. So far, I think, we beat the English cultivators in Victoria growing,—however, in the peaceful competition of horticulture, JOHN BULL will beglad to learn that his brother JONATHAN has gone ahead a second time *on the water*. Our plant ripens its seed perfectly, even in the midst of winter. The seed germinate readily under the same treatment as that given to the parent plant. Plants frequently come up in our tank from self sown seed. One of these, not four months old, recently bloomed in a box six inches deep, eight inches wide, and ten inches long—the box being plunged in the large tank. The leaves were two feet in diameter, and the flower seven inches across. This plant was growing near the water wheel, which may yet be found more useful than some are disposed to admit.

Skillful treatment may overcome the difficulties apparent in out door summer cultivation. I do not consider a very *high* temperature essential,—but, whatever temperature it will grow in, must be maintained with *regularity*. It will evidently flower and grow in a small space; but to realize the full effect of its majestic beauty, good room must be afforded.

Is the plant an annual or a perennial? This has not yet been definitely settled. I should not be surprised to learn that it is one of those plants which are annual in some countries and climates, biennial in others, and yet still in others perennial—one of the same class as the *Ricinus communis* for instance. In England they incline to set it down as a perennial. Our light and climate may advance it more speedily to maturity. An English winter, though it deprives the grower of flowers, may in consequence add to its longevity, and, although it is being classed amongst perennials, only lengthen out for a few months its biennial existence. But all these things have yet to be known.

Mr. CORE has kindly permitted me to state that he will be happy to supply any one forming a tank for the Victoria with a plant for it,—and I should be pleased to give any desired information to those desiring it, as well as to record any future observations in the pages of the Horticulturist, should the editor encourage them.

THOMAS S. MEEHAN.

Holmesburgh, Pa., April 4th, 1852.

ON THE THEORY OF PRUNING—No. 4.

BY L. YOUNG, SPRINGDALE, KY.

DEAR SIR—Before closing these numbers by a few short comments upon the several processes of pruning, listed under the head of the second class, I have determined to make a few desultory remarks touching those external evidences, which, in practice, the operator should recognise as indications suggestive of a particular process in its class above others, or as symptoms, which, as violent or gentle in character, are more or less abiding, of delay in the application of the knife.

However much the success of the unskilful and of the negligent, may seem at war with such a proposition, still I hold it to be true, that every stroke of the knife, every rubbing off of a leaf or bud, exerts its influence for evil or for good, and that he who prunes without object, or who, attempting to accomplish some design, is not assured that the cut he is making will accomplish such design, is employed in an exercise quite as likely to result in mischief, as in advantage. French philosophy and French skill, have brought a knowledge of those rules of practice to a high degree of advancement, in so much that many of their specimen trees, viewed as artistic productions, excite the admiration of all beholders. It is a source of surprise to witness with what passive obedience they submit to be moulded into form, by the will of the trainer, and how, at the same time, the operator can exercise such rigid constraint over the form of his trees, and yet preserve their general health.

Here, however, is a fundamental rule of the French school, endorsed by high Anglo-Saxon authority, which if not a paradox, is certainly to be received as true in a much more limited sense than that set forth in the books—it is this, that “*in all trees, and under whatsoever form*, the branches of the most vigorous parts should be cut short, and those of the weak parts long,” in order that the greater surface of leaves produced by the numerous buds of the weaker branches may attract more sap, and thus produce a more vigorous growth! This, it will be perceived from the reasoning, is a winter or spring operation. In about the year 1840, I recollect seeing a lot of pear trees headed back—whilst at the same time their roots were treated with a dressing of manure well spaded in. This treatment was applied as a remedy for feebleness of habit, the result of over production, and at the end of five or six years the amputated trees had grown larger than when headed back. One of them, a Red Bergamot, had, indeed, become barren from over luxuriance; here and there, only a branch was seen, sufficiently fruitful, so that here, if ever, one would have thought, was a case for the application of this French rule. Abundant space around several of these branches, was formed by cutting out the neighboring parts, and the whole system of buds left to the feeble branches, with free space for enlargement. At the end of two years, however, the bearing branches remained stationary, whilst the vacated space was re-filled with shoots more nursery-like and unproductive than those removed. I believe, as has been stated in a former number, that whenever fruit-buds have acquired control of the sap, by seizing upon the extremities, which are commanding points in the system of circulation, that shortening-in is the only means of restoring the wood system to active development—and that in this case, and at this season of the year, which is the season of rest, the proper remedies were shortening-in for the feeble branches, and bending down for the too vigorous. For the same reason, that is, its tendency to cripple the energies of the wood system, I cannot but dissent from the implied doctrine of the books, that bearing its crops “*principally at the extremities of the branches*” is one of

the healthy habits of the fruit tree. Without attempting a scientific classification, I think trees and plants cultivated for their fruits, would admit of a rude division into three classes, viz: First, those which develop the bloom with or without an attendant system of leaves, before the bursting and growth of the wood-buds. Second, those performing the wood growth of the season before the development and expansion of the bloom, and third, those bearing fruit upon branches of the current year, which branches continue to elongate after the bloom has been developed. The Quince and the Orange are examples of the second class. In these cases it would seem but maternal kindness on the part of nature, to instal these fruitlets into the most favorable position, having to contend, as they do, for subsistence, even in infancy, with the fully developed leaves of the wood system. In these instances, however, in which nature herself dispossesses the wood system, she restores the possession on the ripening of the fruit, by a sort of shortening-in. In the first class, embracing the apple, pear, and many others, there exists no adequate necessity for giving to the fruitlet the same "*vantage ground*." The fruits setting before the development of the leaves and branches of the wood system, they begin to draw upon the circulation for subsistence, and are not only capable of competing for a share of the sap, but in excessive crops entirely suspend the wood growth; again, it is hardly reasonable to infer that nature designed this as their normal position, since she has not provided for the contingency of keeping up a supply of wood in those parts, by restoring the extremities to the possession of the wood system at the end of each crop, as in case of the Quince. But, on the other hand, the apple, and some others, bear their fruit in terminal clusters, the center of which are buds, which buds will continue to point the extremity of the branches with additional fruit buds, until removed by accident or the knife, or until the branch itself shall perish from loss of wood.

In the third class, the Pecan and Chestnut, among trees, also the vine and melon among plants, might be enumerated. It is a well known fact, that the Pecan and Chestnut, under cultivation, produce abortive fruits for many years before they come into successful bearing, if the annual growth continue vigorous and luxuriant. So too, every body does, or may know, that if a single cluster each, of grapes, be permitted to grow upon two branches of equal vigor, upon any vine, and if one of those branches, being headed back to within one or two joints of the cluster, is kept free from suckers, whilst the other is left to grow at will, making a length of ten, fifteen, or even twenty feet, that at the season of maturity the long branch will have diminutive berries, some shriveled, some ripe, some green—whilst the amputated branch will bear a broad-shouldered cluster, with berries, each one of which has pressed his neighbor so sorely for space to expand, that all have lost their rotundity.

To me it seems hardly to admit of a doubt, that failure in both these cases is attributable to the power of the wood-bud system, in a state of active growth, to starve out infant fruits, over which it has the advantage in position, as it always has when located at the ends of the branches.

I think the following experiment will tend to show that when even annuals display similar habits, the same general laws prevail. Some years ago I witnessed an experiment of an amateur cultivator in growing the watermelon. Having made a very early planting upon a small square in a village garden, in consequence of inclement weather, but four plants vegetated. Somewhat resolute in temperament, and impatient of defeat, he determined to try by extra culture, and the appliance of all the expedients of the cultivator's art, to raise a crop from these plants, which were over twenty feet apart. The branches were constrained to take such directions as to cover the whole space, and in order to keep

their vigor unimpaired until the whole space was covered, the fruit-bearing force was kept in abeyance by removing the embryo fruitlets as soon as visible. The cultivator, however, soon discovered, that even within the comparatively placid waters through which the humble tiller of the soil passes in the voyage of life, a Scylla not unfrequently has its corresponding Charybdis; for the very means adopted to enable these plants to avoid a short coming of the ability to cover so much space, drove them into that habit of over-luxuriance which generally swallows up the fruit-bearing force. Many of the leading branches attained the size of a man's thumb, and I recollect some roots exceeded thirteen feet in length, beside the filamentose spongiole, too delicate to be gotten up entire. It is the after treatment in this case, which I think suggestive of principle and instruction—which was, to prune the vines much after the fashion of the grape crop, removing unnecessary laterals, and after allowing only two fruits to the largest branches, to prune off the leading shoot a few joints beyond the last fruit, whilst the fruits were quite young. The result was, an average yield to each plant, of between thirty and thirty-five fruits, of fair size and good quality, a yield by many thought remarkable.

Appertaining to this third class, there is a "vexed question," about which a few suggestions may not be inappropriate, which is this—"what is the proper time for heading back these leading shoots, when the design of the operator is to benefit the fruit crop?" According to some authorities, it would seem quite immaterial, since they direct amputation "when the branches become inconveniently long." Most authors fix upon a date subsequent to the "*setting of the fruit*," and but a single writer within the limits of my reading, has spoken of a date "anterior to the expansion of the bloom." It appears to me, if external symptoms are to be consulted by the operator for his guidance, that the degree of luxuriance indicated by the wood growth, during the first few days after the embryo fruits become visible, should be regarded as the measure, both of the necessity of amputation, and of the danger of delaying the process; and that in a case where the wood growth was so rapid as to form a branch eight to ten feet in length ere the expansion of the bloom, amputation delayed to that period, would be pregnant with greater danger to the fruit crop, than entire omission of the process in a case of feeble wood growth.

L. YOUNG.

Louisville, Ky., March, 1892.

HORTICULTURAL NOTES FROM MICHIGAN.

BY WM. ADAIR, DETROIT.

A. J. DOWNING, Esq.—Dear Sir: Your correspondent, Mr. LEWIS F. ALLEN, in the March number of the *Horticulturist*, says "he would give a trifle to know if the old French Pear trees on the Detroit river were ever struck with the blight," and complains very justly, that cultivators in this quarter are so dilatory in giving the results of their experience. Being far more familiar with the horticultural implements than the pen, it is with some degree of diffidence that I say any thing on the subject, when there are so many much more competent to do it justice.

In this vicinity there is nothing of the blight known, and we are told that "where ignorance is bliss, 'twere folly to be wise." The old Pear trees line the banks of the river for several miles, both above and below the city, and are still as healthy and vigorous as the native trees in the forest; and notwithstanding their immense size, being fifty or sixty feet high, and from two to three feet in diameter, they are sound and solid to the heart,

bearing regularly and well. *One hundred and twenty bushels have been gathered from a single tree in a season.* The fruit is not of the first quality, still it is very good, where there is little better to be had, and sells readily from four to six shillings per bushel. It more nearly resembles the Early Crawford, [Catherine? Ed.] than any other variety with which I am acquainted, and there is but very little difference in the quality of the fruit, among the old Pear trees around Detroit.

It is worthy of notice, that all the old and magnificent specimens of the pear tree, that have attracted so much attention among horticulturists, stand near the bank of the river, so that their situation is never wet, although the soil is very retentive of moisture, (being mostly a heavy black loam, from nine inches to a foot deep, with a stiff yellow clay sub-soil.) Perhaps this may be accounted for by the settlers at that early period, locating on the immediate banks of the river, which is evident from the shape of the farms, being only narrow strips, about eighty rods wide, and running back three miles, all considering it important to have a front on the river. By such an arrangement, each would have their fishing ground, and would also be better able to protect themselves from any incursion of the Indians.

Although the predominating soil is a stiff clay loam, still I have never seen so much diversity of soil in so short a distance, as there is to be found in the immediate vicinity of Detroit. At some period of the world's history, it was probably all submerged by the waters of the lakes.

I have grafted many of the leading varieties of the Pear on some of the old trees that stand on my place, and all seem to grow as vigorously as the original trees themselves; (they have not yet been grafted long enough to show specimens of the fruit,) viz: Onondaga, Angouleme, Bartlett, Virgalieu, Beurre Diel, Bloodgood, &c. This brings to mind an anecdote that occurred in connexion with these pear trees. A Scotch friend came to visit me at the season when the fruit was at maturity. Wishing to test their qualities, he climbed the tree to assist himself, during which time he had been examining some of my labels, which were, perhaps, not very legible to him; when he came down he accosted me with—"queer pears," them; there is one marked the *Vera Diel*, an' another *Bloody-good*, an' I couldna' read the rest." After a laugh, I told him that he had not read the names quite correctly.

I have noticed a disease in Pear trees brought from the east, which is, perhaps, the blight, and which may throw some light on the subject. When Pear, Peach, Apricot, Nectarine, and heart Cherry trees, are received in the fall, it is my invariable practice, to plant them away in a cellar till spring, thus preventing all possibility of their being winter killed; and this, too, would surely prevent the *frozen sap blight*. During summer the diseased specimens begin to show a yellowish, sickly appearance in the leaves; by degrees the tree is completely denuded of its foliage, black spots begin to exhibit themselves on the branches and trunk of the tree; finally the bark shrivels, vitality being longest retained immediately around the buds—this being the case sometimes, even throughout the winter, the roots and stocks being still apparently fresh. Is this the blight? I have never observed this disease after the trees have grown one season, without the aforesaid symptoms; may we not infer from this, that the malady was in the tree before it was received?

The winter with us, has been very severe—on the night of January 19, at 11 o'clock, my thermometer indicated 17° below zero. Many of the Bourbon and Remontant roses are killed down to the snow line. The beautiful new shrubs, *Spirea prunifolia*, and *Wigelia rosea*, have stood it bravely—not a particle of the wood is killed; this is certainly an excellent quality, as they are the most beautiful of the new shrubs that I have seen.

The Peach trees have also stood it well; the young wood was fully matured in the fall, so that not a particle of it is killed. In examining the fruit buds, I find that many of them exhibit the black speck in the heart; still they are not all killed, and if they are not more than half destroyed, it is rather beneficial than otherwise, as the tendency of the Peach with us, is notoriously to over-bearing, and this saves thinning out.

Now this seems rather to combat your theory of the crop being destroyed when the thermometer reaches 12° below zero; under certain circumstances this may be the case, but that such is not the case under all circumstances, I am confident. During the winter of 1849, my thermometer indicated 18° below zero. This was shown by two different instruments, one of London, the other of Philadelphia manufacture; they hung side by side, so that there could be no mistake. Many prophesied that there would be no peaches next season; the season, however, showed a different result, for we were rewarded with an excellent crop.

Respectfully yours,

WM. ADAIR.

Detroit, March, 1853

CRITIQUE ON THE MARCH HORTICULTURIST.

BY JEFFREYS.

The Beautiful in Ground.—"Paint me as I am—warts and all!" said stern old OLIVER CROMWELL to the artist who was taking his portrait. It is the strangest thing in the world, when God has made a spot—and made it right—that men should want to spend a small mint of money to pervert nature, and twist it into other shapes, merely to show that they *can* do it. Why, anybody can mark out a chess-board, or build a flight of steps, with earth, as well as with timber, although he may call one a rectangular lawn or garden, and the other a line of terraces.

There is hardly a spot of earth of any magnitude, but what has a character of its own—an expression, suitable, in the hands of a *sensible* man, to make it agreeable and pleasant. Then why not be content with its *natural* capabilities, which, when only "slicked up," gives it its own peculiar beauty, beyond all the expense and conventional expression which spade, plough, or shovel, will add to it? The last paragraph of the article in question, is living perpetual, truth.

The Sage Grape again.—This is a free country, and if folks prefer these hard-pulped, musket-ball grapes, why let them enjoy them, in all conscience. The more you tell a man that his taste is bad, the more sure he is that yourself, not he, is mistaken. Hudibras was right:

"Convince a man against his *will*,
He's of the same opinion still."

The world is wide enough for all sorts of grapes—the Sage among them. I shall not, however, send for it.

Cropping Vines under Glass.—I have the more confidence in this article, because Mr. CLEVELAND grows his *own* grapes, instead of growing them for others. The professional gardeners are good men, many of them; but I have found a majority of them so opinionated, that they are troublesome. A cultivator of the soil, and a horticulturist, educated *abroad*, to be successful in *this* country, must be *caught young*. It is no proof, because a thing, or the mode of doing a thing, succeeds abroad, that it will equally succeed in America, with such a difference of climates and soils. There can be no more question that a

plant should be in some degree of maturity before its bearing properties are heavily taxed, than that the animal creation should not be over-burthened when young.

All *growing* things have their periods of infancy, maturity, and decay. The grand desideratum is to understand their true nature, and treat them accordingly.

Vegetable Physiology, &c.—Mr. BARRY I believe to be right in *principle*, and I trust he will be able to introduce the *general practice* to accord with such principle. But he'll have a hard time of it. Take us Americans, "by and large," we prefer the "hop-skip-and-jump" mode of doing things—in the pruning line, particularly.

Why won't Mr. BARRY write a distinct, practical, familiar, *understandable* treatise on this subject? It would certainly be an acquisition to our Pomological books, of which we have several good ones. Still no treatise, be it ever so good, and ever so plain, will direct the workman in *all* things, unless he be well grounded by study and observation, in the theory of the particular fruit on which he works. The *principle* on which the plant grows, blooms, and bears; its habits; the soil on which it stands—all must be consulted. Dear me! after a cart-load of reading, how little one knows of this subject when he sets himself to work in the orchard. It is the work of a life almost, to do these things successfully.

The Progressive Decline of the Vital Powers of a Plant.—Mr. TOWNLEY is given somewhat to speculation in this, and a previous article, on the Decline of Fruits; and he certainly manages his subject with much ingenuity. I don't say that he is not right; but I am not yet convinced of it. Diseases, and various circumstances, affect plants, and varieties of plants. The potato is probably the best subject to illustrate his theory, but not at all conclusive. One great difficulty in arriving at the truth of the theory, is from the absence of data to govern the origin of the varieties of the plants or fruits, in question; and until he produces some reliable *fact* of the kind, I fancy he will be slow to find believers to the extent of his speculations. I admit this last assertion is no *proof* that he is wrong. Every great discoverer of a new thing, or a new *principle*—very different, however, from a new *theory*—has had the misfortune to combat prejudice, and ignorance; *theories* are infinitely harder than facts to surmount, unless they be fortified by illustrations conclusive and irrefragable.

Notes on Pears.—Mr. ALLEN looks on the dark side of the picture. Still he may be partially right. Let us compute the number of Pear trees advertised by the different nurserymen in this March number of the Horticulturist:

Daniel Brinkerhoof of Fishkill, has 20,000, of over 100 varieties.

William R. Prince & Co., of Flushing, have "8,000 very large," besides an *immense* number of all sizes; and as Mr. Prince does things on a great scale, we may safely set him down at 100,000 altogether.

A. Saul & Co., of Newburgh, have over 50,000 *saleable* trees, besides an equal number, as we may infer, of *smaller* ones.

Hovey & Co., of Boston, have 80,000 trees of *all* the *popular* varieties, to say nothing of the *unpopular* ones.

Here are 250,000 pear trees advertised by four nurserymen. Then there are fourteen other advertisements of as many different nurserymen, who may average 20,000 each, making 280,000 trees more; in all, upwards of half a million of trees produced by eighteen leading nurseries. This amount may be safely multiplied by four, for nurseries not represented, and we have the snug number of two millions of pear trees now on sale fit for planting! One half of them, if sold, may be safely estimated as lost by casualty, in which may be included losses in planting, blight, and destruction from other causes. Thus,

are a million of trees to be planted, among probably a hundred thousand planters—certainly not a large number when so widely distributed.

This is simply *statistics*; and probably loose, and underated at that. So we see, that with all the pear plantations, we are not likely to be overstocked with fruit of this kind for many years. Go on, gentlemen pear-growers. Like our first parents, when driven from Eden, the wide world is before you, where to choose; and if you should, perchance, be like to overstock the country, the blight and other troubles will be sure to relieve your solicitude. The pear is too delicious a fruit to be free from deadly maladies, like the apple; and the full luxury of its bounties is not to be enjoyed without "much tribulation."

Mr. A.'s "dozen varieties" may answer the purposes of some people, but I fancy few pear growers will be content with such meager limits. "Variety is the spice of life," and all the infinity of *new* varieties in pears will be tried, whether they have any "spice" in them, or not, beyond the pungency of paying for a *fancy* article.

The fate of his "Orange Pear" is not alone in the annals of pomological experience. Among them he may find many parallels in the want of public appreciation of one's favorites, and possibly now and then a man who may have mentally recited the blubbering lamentation of the boy, in companionship with Mr. A.'s non-classical extract:

"I never had a *piece of toast*
Particularly good and wide,
But fell upon the *sanded floor*,
And *always* on the *buttered side*."

What will the Edifice cost?—A very pertinent question, to which I never yet knew an architect, or a builder, to give a correct answer. No one can read this extract without a conviction that Mr. Cousin understands what he is writing about. Half of the misery which arises from ambitious building, comes by underestimating the expense. If a rich man applies to an architect, or builder, to furnish him a plan and estimates, in some cases—depending on the character of the said architect or builder—he will get a correct one. In other cases, the applicant himself—*screwing a bargain*, as if buying a lot of unsaleable goods,—insists upon the gratification of all his wants and all his fancies, and beats down the price in everything to a degree of absolute meanness. His contractor, knowing his man, goes to work. The employer, finding, in the progress of things, that he is to have but a miserable clap-trap affair, or to get a good house, must pay for it, and his feelings and pride already enlisted in it,—or, worse than all, an insisting, persevering wife and daughters at his back—I dislike to say a harsh thing of the gentler sex, but they sometimes have the gift of *persuasion* to an eminent degree,—after an agony of hesitation, lets loose the purse strings, and a riotous expenditure is the consequence. His troubles are now perpetual, and at the conclusion, the question of what it *has* cost will never be out of his mind. A successful man, who considers himself "cute" in his bargains, is apt to think, when looking at his neighbor's house, which has cost him five, ten, or twenty thousand dollars, as the case may be, that *he* by his own more adroit management may build one equally good for half or two-thirds the money, not thinking that this matter of house-building is out of *his* line. And so proceeds in the manner aboved stated.

There are two or three principles of action connected with building, in which every man about to build should be strongly fortified. First of all, he should know how much money he is willing to spend. Next, he should ascertain what sort of a structure, or structures, of a suitable kind, he can get for his money. Then, adopt a plan that will be *complete* within the amount of his appropriation, with twenty-five to thirty-three per cent added to the builder's estimate. And, lastly, *not to be in a hurry*.

These remarks, however, are in but a partial allusion to Mr. COUSIN'S article, which is full of sound sense, observation, and fine taste. Churches, and other public buildings, got up by corporations, associations, and other congregated bodies, are to be governed by different considerations in their cost, as they are often designed in given styles and for particular uses, which should be fully carried out, or let alone altogether. A tawdry affectation of a fine thing, is the sheerest folly imaginable.

Frontispiece—Design for a Free School.—"LA'-DIES, hand gentle'm: the play which I 'ave the 'oner to produce this hevening, is the celebrated Tragedy of 'Amlet. But, as the unrivalled *hactor* who was to appear before you in the character of 'Amlet, has been taken suddenly *hill*, the play will proceed with the part of 'Amlet *left out*!" Thus declaimed the unfortunate strolling manager before his village audience, in a calamitous dilemma. In like manner, the "Design" is here left out! When that appears, we'll talk about the school house.

New and Valuable American Grape.—I have heard of a good many such fruits. *New*, no doubt; but of the rest, the less said, the better. "Perfectly hardy in Massachusetts." Good; for Massachusetts is a cold country. "Free from mildew." Still better. "And ripens before the Isabella or Diana." Capital! Now, let us know how the grape *tastes*; and if it be as good as the "Rose Chasselas," it will answer to give a certificate in its favor. It must, however, be a good deal *better* than the Diana, to merit that—for this latter grape is a very *common* thing to *look* at, and inferior to the Isabella in flavor. When any man can produce a *native* "American Grape," which has the fine flavor, and soft pulp of the Isabella in the latitude of Long-Island, with its vigorous growth and prolific bearing; or of the delicious aroma, productiveness, and vigor of the Catawba, at Cincinnati; and the said "American" grape will ripen freely in latitude 43° north, that man ought to make a fortune out of it; and he probably will do so, if he possess foresight enough to produce, ten, twenty, or a hundred thousand plants fit for sale simultaneously, when startling the country with the intelligence, and giving the proof of its excellence! I hope your correspondent is correct in his announcement.

The past Severe Winter.—Walking up street the other day, I met "the oldest inhabitant," and being some years acquainted with him, we had a long talk "about the weather." As the past winter has been the most severe of any in my own recollection, I taxed his memory for its equal. He could name only the winter of 1810-11. My remembrance fell back to that rigorous winter, then a small boy in this city of New-York; and although I was then perfectly innocent of "degrees of Fahrenheit," I well recollected how, with a thousand other little shavers, all bundled in great coat and mittens, and ears bound in tippets, we turned out to *slide*, among the larger boys who skated on the "Collect," where the "Bastile" now stands in Centre street; and also heard our father complain of the high price of wood—coal was not much burned in New-York then—and that the corporation bought up several thousand dollars worth of hewn building timber at the lumber-yards as fuel for the poor, as the wood sloops could not approach the city, for the ice.

Still, I cannot altogether concur with Mr. BUIST in his fears of the destruction of our trees by the frost. "God tempers the wind to the shorn lamb." And although the cold has been extreme, it has been steady. An uncommon degree of cloudy weather has accompanied the cold, which has shut off the rays of the sun—frequently more destructive in its effects, with much less frost, than we have now had. The peach, and some other tender buds, may have suffered. Yet I think with all hardy fruits, there will be found less destruction than in some comparatively mild winters. So far as my own observation has occurred, the young wood of our fruit trees is sound and healthy. The growth of last

year was well ripened, and thus prepared for almost any degree of cold. The Osage Orange, which has stood in my grounds many years, is perfectly fresh and sound to the terminal bud of its last season's growth. In some mild winters, with the thermometer not falling lower than 6° above zero, it has been killed back twelve inches of its previous season's growth. This is esteemed rather a tender tree in our latitude.

The exceeding heat of the first half of last September, gave uncommon ripeness to the young wood, and on examination, it will probably be found that, although the winter has been rigorous almost beyond precedent in modern times, with that wise superintendence of a kind Providence, which so mercifully governs the physical world, our vegetation will come out as vigorous and fruitful as when it has scarcely been scathed by the frosts of winter. Early in March, however, the winter broke through, and spring came out in its accustomed joyousness. The Song-Sparrow, the Blue-bird, the Robin, and the red-winged Black-bird, appeared among us with their welcome songs, and but for a timely check of a few cold days, and a snow-storm about the 20th, as usual, we might have suffered more by the untimely warmth of an early spring, than by the exceeding cold of the winter. If I may venture a prediction, the year 1852 will prove one of uncommon fruitfulness.

JEFFREYS.

NOTE.—In Critique on February number, inserted in April, page 175, read Genoa, for "Geneva," and showmen for "shoemakers." I could not be guilty of slandering a worthy class of our mechanics, in such a scurvy category as was there enumerated. J.

THE ORANGE PEAR—ONCE MORE.

BY L. F. ALLEN, BLACK-ROCK, N. Y.

I have read the communication of Col. HODGE, in the last Horticulturist, and am under obligation to him for its history—in *Buffalo*. As to the rest of the matter, touching its merits, he is partly facetious, partly laudatory, and the remainder altogether at loose ends. Setting aside the *immaterial*, (I perceive the Col. is somewhat of a lawyer, as well as pomologist,) part of his communication, which is quite well, I shall only notice what he remarks of the pear in question, and will hold him to the point, exactly.

I said that the Orange Pear is a thrifty grower, very hardy, and bears *large* crops *every* year. In these qualities he agrees with me. I also say, that its valuable qualities are "for preserving and baking," and in these it is eminently good, or the best that I have known. In these last qualities, Col. HODGE takes issue with me. Now, what does he say in reply? Why, he plays the attorney, goes into a process of special pleading, and *pettifogs* the case, without any rebutting testimony whatever. He quotes me as saying that it "absorbs sugar perfectly," as I did say; to which he adds "and abundantly," which I did not say. He also asserts that its flesh is "dry," which I did say, and "yellow," which I did not say. On the contrary, its flesh is a delicate white—as white a fleshed pear as any other. I said the *color of the pear*, (and by this any one would know I meant the *outside* color, if he will refer to my description,) "is that of a rich lemon." He accuses me, in his self-instituted trial, of being a "partial presiding judge, on *ex-parte* testimony," in which I am an "interested party." Very well; what has he to rebut this "testimony," and "charge?" Why, nothing that is either evidence—or inference, even. Did he ever preserve the fruit—or bake it, to test its qualities? He quotes the action of

the Pomological Convention, and states what was *not* the fact—that I introduced a “dish of preserves,” meaning, I presume, “preserved pears.” The pears which I introduced, were not “preserved,” but “baked,” which several of the Convention tasted, and pronounced “good—very good.”

He also compares it to the “Morello Cherry,” and says that “he can cheerfully subscribe to most of the good qualities given to it by Mr. A.” Then why damn the pear with faint praise and ridicule, as he afterwards does?

Another thing Col. HODGE ought to know—as a pomologist; and that is, that our best table fruits, are seldom our best cooking and preserving fruits. The Morello Cherry is one in point. Although an indifferent table fruit in the raw state, its peculiar valuable qualities are developed only by cooking. Look at the books, where the acid and Morello cherries are the most approved for cooking and preserving. So it is with apples, for drying, cooking, and cider. The heaviest *musted* apples, like the Harrison, Carpsfield, the Crabs, Red Streak, &c., are all indifferent eating apples, but the best of all for cider. So for baking. The best table apples are far inferior to the Lyman’s Pumpkin Sweet, a green, hard, astringent fruit, not fit to eat raw, but probably the most luscious baking apple we have. So with the Talman Sweeting, which, although a fair table fruit, is infinitely better baked, and aside from the Pumpkin Sweeting, hardly has its equal. And why should it not be so with the Orange Pear, an *astringent* fruit? Its quality is not developed without fire to bring it out, and burst its *raw* astringency. *Melting* pears—the best eating varieties—are not good for preserving or baking. Their fine juices are dissolved in the *ripening* process, and cooking only *dissipates* the juices, instead of *developing* them, and they run off, leaving the flesh flaccid and tasteless, instead of retaining them within the flesh, and perfecting them, as with the others. I have tried the melting pears for baking and preserving, by the side of the Orange Pear, and know their inferiority. I very much doubt whether Col. HODGE has ever done as much.

To *test* this matter, I will make a proposition: Col. HODGE may take any of the *melting* pears of the best table quality, like the Virgalieu, Seckel, Louise Bonne de Jersey or Bartlett, and preserve them, weighing alike, his pears and *white* sugar—and nothing else shall be used, except water; and I will take the Orange Pear, observing the like directions, and the preserves made from them, shall be placed without designation, on the fruit tables of the State Agricultural Society, at their annual meeting next February, in Albany, and submitted to the examination of a competent committee, appointed by the Society; and if the melting pears then, and there, considering the quantity of sugar used, shall excel the Orange, I will surrender at once; but until then, I shall maintain the integrity of the Orange Pear, which he has so ungratefully cast off, against all the *inference* he may bring against it.

A word only, as to the *ipse dixit* of these fruit Conventions. They have done much good, and I hope they will continue their proceedings. With the fruits in *season* before them, and those with which they are all well acquainted, if not present, and in *season*, their opinions and decisions are valuable; but with a *new* fruit, of peculiar qualities, as in the case of the Orange Pear, time, calm consideration, and *trial* is necessary to decide its merits. The mere *say-so* of one or two partial or interested parties, should not govern, and when decisions are so made, they are entitled to little weight. The Brown Bourre, quoted by Col. HODGE, is in point. I had tried the pear then only one year, and knew little about it. It had not then done well with me; I wanted to condemn it—and so did friend HODGE, with the rest of the “Doctors.” It is an old adage, that wise men may change their minds; fools *never* do. I hope neither of us are in the latter category.

As Col. HODGE has incidentally mentioned it, let me say a word about the

PORTER APPLE.—It has borne with me only two or three years, on young trees. Yet so far, I think it *the very best* cooking apple of its season, say from early in September to the middle of November. It is a fair, and rich table apple, but rather tart to my taste, as I am not partial to tart fruits. It will cook in almost any way—either bake, stew, or fry, in a very few minutes. It is, besides, of good size, large, fair, uniform, well distributed on the tree, and bears most abundantly. As a desirable house-keeping, and market apple, its equal is seldom to be found. I shall cultivate it largely. The tree grows vigorously, the wood is strong, and the tree has a finely spreading top. In fact, I have yet seen no objection to it in any particular, of wood or fruit.

LEWIS F. ALLEN.

Black-Rock, Apr. 2, 1852.

WARMING AND VENTILATING HOUSES.

BY A. D. G., CLINTON, N. Y.

I have read your various articles upon heating and ventilating houses, with much interest. And this, partly because of the great general importance of the subject, but especially, because of its connection with my own health and comfort. A pulmonary affection has driven me for two winters past, to the South, in search of a milder and purer air than, with our present modes of arranging houses, could be found at the North. In your work on Country Houses, you concede, if I remember rightly, that the best modes now practiced for securing a warm and wholesome air in our homes in winter, are most expensive, and not likely to be adopted by persons of moderate income. If any plan can be contrived, suitable for general use, it would certainly be a great public benefit. Profiting by some of your own suggestions, allow me to propose a plan which may lead towards such a result.

For the month of October, November and April, open fire-places, with Arnott's chimney-valve, in every room, will answer all needful purposes. But when December's blasts begin to blow, place your stove in any convenient part of the room, enclose it in a tasteful Russia iron case, leaving a space between the two on all sides, of six or eight inches. Let a door be made in the sheet iron case, corresponding to the door of the inner stove, only somewhat larger, to facilitate putting in fuel. Have a place in the outer stove sunk in over against the draught of the inner, so that the draught will communicate with the air of the apartment, and not with that between the two stoves. Cover the top of this sheet iron case with an ornamental grate, or wire gauze, surrounding the urn of water standing on the inner stove. Now connect this apparatus with the air out of doors, by a tin conductor, from three to five inches in diameter, leading from your cellar window, along under the parlor floor, and then up through the floor, immediately under the stove, into the open space before described. Insert a register in the pipe directly under the stove, by turning which with your foot, you can easily regulate the quantity of fresh air you wish to admit.

These outer stoves can be made quite ornamental, and can be put up in as many rooms as you desire to warm.

The objects proposed to be gained by this arrangement are obvious. Fresh air will be constantly introduced into the house, and yet not admitted into the apartment occupied, until it has passed around the heated sides of the stove, and become somewhat warmed. In this state, no harm can accrue from it to the health of the most delicate, while if a simi-

lar volume of cold air were permitted to pour directly into the room, the health of all would be endangered. With this apparatus for supplying pure, warm air, and Arnott's chimney valve for carrying it off as it becomes vitiated, should we not have a simple, economical, and efficient mode of warming and ventilating country houses?

The only practical difficulty in it which has occurred to me is, that with such a current of cold air continually surrounding the inner stove, there might not be sufficient heat radiated to warm the room. Perhaps, however, the warm air pouring out from the top of the sheet iron case would accomplish this. If it would furnish 60° or 65° Fahr., it would give as high a temperature as a person ought to live and sleep in during the extreme cold and fluctuations of our northern winters. Please give us your opinion as to the practicability of the plan above suggested.

Respectfully yours,

A. D. G.

Clinton, N. Y.

REMARKS.—What our correspondent suggests is a great improvement on that popular abomination—the common stove. Just such a ventilating stove, is, in fact, already in use in the common schools of Boston—"Clark's Patent ventilating Stove," (described in our "Country Houses," p. 471.)

But the real difficulty in all stoves lies in the high temperature to which the surface of *hot iron*, which forms the stove itself, is liable to be heated, and the certainty with which hot iron robs the air of its purity, when so heated. If a stove could be invented which, instead of heating the air by presenting a surface of hot iron, backed by red-hot coal or wood, did so by presenting a surface backed by *hot water*—or, in other words, if the iron stove were cased with a thin space of water all round, and the radiated heat came from this surface of boiler, which *could never be heated above boiling point*, and would, therefore, never rob the air of its purity—such a stove, with the supply of pure air introduced as our correspondent points out, would be perfect, quite healthful, and satisfactory.

Much the most genial and healthful temperature yet attained, is that from hot water pipes, or steam pipes. We notice, with pleasure, that the Astor House, and many of the large hotels and steamboats, are of late heated in this way. Some of the manufactories are endeavoring to invent a boiler and pipes sufficiently compact and cheap, to answer as a substitute for the common furnace, in heating houses. It is undoubtedly true, that enough heat is wasted in the kitchen flue of many dwelling houses, to heat the whole house most completely and salubriously, if it could be made to heat a hot water apparatus, connected with a system of ventilation, by which all the heat could be retained in the house. Patience, and continual experiment, will, we trust, bring about this desirable result, for, with the exception of the Russians, no civilized people breathe so much poisonous air, as we Americans of the present day. Ed.

THE GRAPE IN VINERIES.

BY T. W. L. JR., YONKERS, N. Y.

Is there any rule for the distance of grape vines from the glass in different latitudes?

From my own experience in this part of the state, I would recommend about nine inches, but in a more southern climate, where the sun is more powerful, and there is a longer continuance of heat, I am afraid this is too close, and may injure the vines. Some of my correspondents in the state of Virginia, are anxious to put up warm and cold graperies, and if you have any information on this point, you will confer a favor by replying to this communication.

Graperies have now become so common, that few persons who can afford it, will do without them, when for a moderate outlay, they can have from ten to fifteen pounds a day of the different varieties of this delicious fruit, for many months in the year; and any information as to the character of the buildings, and growth and treatment of the vines, must prove valuable to your subscribers.

There is another point in this connection, to which I beg to ask your attention. Is it advisable to go to the expense of a fire in a cold house, not for the purpose of forcing, but to be used occasionally to get rid of damp and prevent mildew, and also to preserve the crop through the early winter months. In the southern states I should judge there is even greater danger of mildew, almost the only difficulty to guard against in the growth of the vine under glass, and which, in our climate, renders the out-door culture impracticable. At the south they have still more dampness, as is shown by the moss and other parasites with which their live oaks and other magnificent trees are covered; and it appears to me, that a fire for the purposes I have mentioned, will even be more necessary there than here.

Yours,

T. W. L. JR.

Yonkers, April, 1852.

REMARKS.—Our correspondent's conjecture about a greater distance of the vine from the glass, being needful in more southern parts of the country, is quite correct. Yet as the grape leaf needs a great deal of strong, pure light, care must be taken not to go too far, (for the farther from the glass, the more the light is decomposed,) and twelve inches is far enough, in all cases. A more important point still, is to have the roof glass uniformly clear, and free from wavy lines—which invariably burn the foliage, and thereby injure the vines.

A common brick fire would be a most useful appendage to even a cold vinery, in all parts of the southern country where there is much dampness in summer. A fire would only be needed occasionally, and the fact that a brick fire is a rapid absorber of moisture, and that wood is the fuel most readily obtained all over the south, point out this as the cheapest and best mode of heating them. By having one end of the vinery—say the north end, terminated by an enclosed shed—the furnace might be placed in this, and the fire carried from it through the house and back, above the surface of the border, without any loss of space.

We may add, that the farther south, the more imperative the necessity of placing the span-roofed vinery, (the most economical and best form for a cold vinery,) on the north and south, instead of the east and west line. In the former case, the violence of the mid-day sun is avoided, and in the latter it is greatly increased, to the manifest injury of the vines. E.

HINTS ON THE CULTURE OF STANDARD PLANTS.

FROM THE LONDON HORT. MAGAZINE.

How strange a confirmation of the truism, "Too much familiarity breeds contempt," may be found in the world of flowers and plants! The most beautiful things in the vegetable kingdom are neglected when they become abundant, and comparatively worthless subjects are courted and esteemed while they are scarce. We may hear a beautiful melody until we are nauseated with it, and we may see flowers and plants so common that we treat them with contempt. But men ought to endeavor to correct this morbid appetite for

novelty, and cure themselves of their ill-founded dislike to subjects that are plentiful. But plants are first doomed to neglect for their abundance, and many have been actually thrown aside. It is with a view to bring some of these subjects from their lowly station or their oblivion, that we have commenced this article, and we hope we shall be able to impress upon the reader the necessity of looking well to the properties of a plant before he adopts a novelty or rejects an old favorite. Some of the subjects we have mentioned in the following remarks, will bear comparison with the most valuable of modern introductions; and it behooves the lovers of the garden, the owners of an establishment, to insist on their being brought forward conspicuously, for they deserve it more than a vast majority of costly and novel plants that bear a heavy price.

THE AGAPANTHUS.—We class this splendid subject among neglected plants, because in the few places where it is seen, it is hardly worthy of the name, from the imperfect manner in which its growth and flowers, in nearly all cases appear. It may be familiar with some of our readers when described as a leeky-looking plant, with an upright stem, and a small mop-like head of blue or whitish flowers. Being unable to sustain itself through our sharp frosts, it is usually grown in pots, but as it is very nearly hardy, it is too often kept among the plants of secondary importance, in the cold frames or pits. Like all other subjects of which the head of flowers is the leading object, there should never be a second head allowed on the plant, and the offsets should be removed as soon as they are large enough to take off. The usual culture is marked by that kind of inattention that is seen to result in the starvation of the plant, and the consequent smallness of its bloom. They are potted and put among the ordinary miscellaneous contents of a cold frame; they have to endure all sorts of privations and visitations calculated to hurt plants: the want of water and room to grow in, and the hot beams of the sun to bake up the root, are their lot at one season; and at another, they are deprived of air and suffer damp. In short, they are fairly classed among neglected plants, and it matters not how soon they are rescued from the degraded rank they at present hold. We have seen, by the occasional introduction of the plant in flower among the collections at the shows, the state in which modern gardeners think it exhibitable. To us, who have seen the head of flowers twice as large, and the growth of the plant handsome, the best we have ever seen at exhibitions was a comparative weed. The only way to grow it is as a single plant; no offsets should be allowed on any condition to grow large enough to rob the parent of any nutrition, for although offsets may have their own roots, and may not receive much nourishment direct from the principal plant, the roots themselves take from the soil that which the main plant requires. The rules may be laid down something after this fashion for the production of the *Agapanthus* in its best possible state. We might observe, perhaps, that although the several kinds will supply bloom collectively from April till October, *Agapanthus umbellatus* is our favorite. This and *A. variegatus* bloom in April and May, *præcox* in June and July, minor in August and September, and *albidus* in September and October. All are pretty.

These plants should be separated every year, and the separate plants potted in the size best adapted for the roots, in most cases size 32; in some cases, if smaller plants, the size 48 will do to commence. The soil should be the richest loam obtained from rotted turf, three-fourths, one-fourth cow dung and sand, with the impurities of every kind washed out. Choose a plant with a good solid heart and plenty of leaves, place potsherds or crocks about two inches thick in the bottom, and plant the subject so that the collar shall be close up to the surface, that is to say, the root only shall be underneath, for if the heart of the plant is sunk at all, it retards the healthy growth, and blanches the leaves. Let this be done in autumn, and place them in a green-house, but where no fire is kept, or in a brick

pit that is very dry with a hard bottom, and so contrived that wet shall run off when it runs through the pots; give air in mild weather by entirely removing the lights, but when the winds are cold or boisterous, or the rain cold as well as when frosty, keep the lights on and close down, or tilted a little on the side or end opposite the weather. What is required is steady growth without checks.

When the pots are filled with roots let the plants be shifted to those of a larger size, and remove all the side shoots or suckers with a sharp knife, or by pulling off without disturbing the ball of earth any more than can be helped. You want all the growth in one central heart or plant, and nothing to detract from it. They may then be returned to the frame, and greater care should be taken than ever to prevent a check. Also the suckers must be removed directly as they appear, and not be allowed to grow at all. If the shift before is from forty-eights to thirty-twos, they must next be changed to twenty-fours, and from these to sixteens, but the latter shift may not be required till the spring. The rule is to shift them when the roots begin to mat or cross one another next the side of the pot. It may happen that in March or April they throw up their flower stem, and the instant they show this the ball should be examined, to see if the roots reach the side; if they do, give them another shift, whatever size they may be in, and water freely, but never let them be watered when the soil is moist. They are now doubly sensible of a check, and therefore require the more care. They like to be cool, but never cold. If they bloom the first spring after planting, it is never so large as when they go over a second; but with care the bloom of a first spring is twice the size of those we are used to see in plants neglected in the ordinary way, by being thrust with other half-hardy things in a cold frame, sometimes only half glazed, sometimes open in bad weather, and at other times closed in mild. Continue to remove suckers or offsets until the bloom is over. Those plants which do not throw up their flower must be attended to in the same way throughout a second season, and during the summer months must not be subjected to the full influence of the sun all day. They should be placed on a dry bottom, where they will have only the morning and evening sun, and not the full mid-day beams, for it only dries up their roots next the pot, and checks them as fatally as frost would in winter. Nor must they be exposed to heavy rains. The best management through the summer is to keep them in the pots, but to cover them in the middle of the day with the glass, tilted all round, and a slight transparent cloth upon the glass. We are prepared to hear many say, this is taking a great deal of useless trouble, but if they will try a few this way, and let the others remain neglected as usual, with the offsets accumulating in the pots, and the plants sometimes wet and sometimes dry, sometimes burning in the sun, and at other times perished with the frost or cold winds, they will soon admit that they have never seen the *Agapanthus umbellatus* in its true character; for in perfection it is a noble plant.

ORANGE AND LEMON TREES.—There is something aristocratic in the appearance of an orange or lemon tree, and although they require no more pains than many plants which are nursed and taken great care of, there is nothing much more neglected. In all establishments there are some overgrown, long-legged, pot-bound plants, that exhibit all the symptoms of neglect or positive ill-usage; generally speaking, the mould they are in is sour and clogged together, the roots half rotted, the trunk or stem covered with scale or vermin of other kinds, the leaves small and yellow. If we see younger plants, that have only been in the country a year, it is the same so far as it has been carried; at the proper season they are not potted; they are making stunted growth, or are otherwise neglected. Whether it is that the plant is misunderstood, or they are considered not worth the trouble, not one place in twenty is a proper asylum for these trees; and when they are intro-

duced in fine health, they generally get worse and worse, until they are scarcely worth the trouble of recovering or of throwing away. When the tubs, or pots, or boxes in which they grow are too big to move about, and are crowded altogether into a receptacle hardly big enough for a third of their number, we can feel the difficulty of getting at them to give the proper attention, and contemplate the certainty of their taking harm from the confinement, their want of air, light, and water, or from too much wet, with nothing to either drain it off or blow it off. We care not where anybody goes, all the old establishments are alike, and with few exceptions, where everything is first rate, it is rare to find either an orange or a lemon tree, or any of the tribe of shaddock, citron, or lemon, in what could be fairly called good health and condition. But for its claims on our skill and industry, where is the subject can beat any of the tribe? Its odoriferous qualities are not excelled by those of any subject in cultivation. Perhaps the *Daphne indica odorata* may take its place by the side of these, but certainly if there be any difference the *Daphne* must give place to the orange and citron tribe. The flowers are delicate and graceful, the tree evergreen and handsome, and tractable in every sense of the word, for it may be trained a dwarf, a pyramid, or a standard. It may be budded, grafted, or struck from cuttings, each will grow in the stock of the other, and the tree, kept in good order, will, during a great part of the year, have flowers, and fruit of all sizes and states of ripeness and unripeness. But no tree sooner feels the effect of neglect, and none have been more subject to it. The shaddock is the most rapid growing of the whole family, and therefore is strongly recommended for stocks, and all the kinds will graft or bud well on it, and grow vigorously. Our first business is to direct something to be done with the old and ugly trees already about the country.

MANAGEMENT OF OLD TREES IN BAD HEALTH.—Cut in the head to half its present size, and cut out altogether some of the weakest branches, that there may be room for a healthy growth from the shortened branches; at the same time that the head is cut in, take the roots out of the tub or pot, and if the ball be very hard, damp, and black, soak it some hours, and wash out all the earth. Fill the box, pot, or tub, thus: first put plenty of crocks, to secure good drainage, next the loam from rotted turves three-fourths, one-fourth cow-dung and peat, the cow-dung very much damped into mould, and the peat, which should be turfy, broken small,—the whole well mixed; some of this on top of the turves, to make a bed, as it were, for the bottom of the roots, and the pot, tub, or box, must be filled up with the compost, tucked in between and well shaken. Orange and lemon trees that appear to be doing no good, and growing no form, or an ugly one, with naked branches, and weakly shoots, may by this operation, be renovated in two or three seasons to full beauty and bearing. But some conditions must be observed in all cases; first, that as the rotten, decayed, and closely matted portions of root must be removed, a large portion of the head must be removed also; second, that the roots must be pressed on all sides with the soil, and this can only be done with great care, and pressing the earth between them with a blunt piece of wood. It is, however, better in all cases to freely prune the roots, to facilitate this part of the operation, and to cut the head in to a complete skeleton, and shorten the whole of the branches very much, to compensate for the loss of roots, and begin the larger quantity of new wood. Let the trees thus treated be placed in a close house for some time, until the new growth has started, when all the shoots wanted to form a good full head, must be left on, but others, where they are too thick, must be rubbed off before they waste the resources of the tree unnecessarily. When they are fairly started, they may have air in mild weather, but should be shaded from the mid-day sun. Watering must not be done too often, but effectually, when done at all; and the pots or tubs

must either be on feet, or propped up with bricks, or blocks of wood, to let the air go freely underneath them, and the water that comes through them run away. If there be any portions of the tree so bare of shoots as to spoil the appearance, inoculate a few buds here and there, of the same kind as the head already worked, for nothing is more unsightly than a decided deficiency in the head or bush, nor is there anything much more easily rectified by means of budding or grafting. This attention, bestowed on old trees that are now so many emblems of idleness, in old establishments, would soon change their aspect; for once in sound wholesome compost, instead of the filth once recommended, they would grow vigorously, and soon bloom. Choose March for the operation; it is on all accounts the best month. As the general culture of the Orange, forms the subject of a treatise already written for this work, we shall not enlarge upon the management now, but we strongly recommend all who possess such specimens as we have mentioned, to kill them, or cure them, directly.

DAPHNE INDICA ODORATA.—This beautiful and highly odoriferous plant, is one of the most neglected subjects in cultivation: a good specimen is as scarce as a Queen Anne's farthing; and he is a lucky man who ever possessed one, if, indeed, he be not lucky who has ever seen one. Its habit of growth is, perhaps, the very worst that can be imagined, if it be neglected; and we never saw a large one that was not so. Its general growth is with naked stems that will not support themselves, with a bunch of short branches towards the end, too thick to grow well; and three out of four of the bunches of flowers on old plants, are deformed or cocks-comb like, and so crowded that the flowers cannot open. Young plants may, however, be grown better, if properly worked, and carefully managed; and when a specimen can be got not too long in the legs, and with half a dozen bunches of bloom, it is not only pretty, but of exquisite fragrance, and tolerably lasting. We have tried to bring old plants into shape and decent growth, until we are almost tired. There is but one proper remedy, and that is to cut them down; but this will not always answer; sometimes they will not break, and the plant is lost; at other times we have been more successful. We now, when we get hold of an antiquated specimen, with its crooked stems bending in all directions, and its bunches of green at the ends, sink the pot in a pit, lay some of the branches, and inarch others on spurge laurel, and so make it at least answer the purposes of propagation. If it breaks near the bottom, so much the better; because, when we release all the layers and grafts from the old stock, any little growth there is greatly strengthened, and we make the most of it. We have, in some instances, found them break well all after the branches were cut back to a few inches from their base; and when we saw how they were breaking, we have been able to preserve as many shoots as would make a good bushy plant, and rub off or cut away the rest. In growing them, they must not be excited; the slower they grow the better, so that they do grow. A cold pit is the best protection, because it keeps off rain, or admits it, according as it may be wanted or otherwise, and it can be made to keep off frost, without wanting fire heat. The soil for these plants should be loam from rotted turves, two-thirds, and one-third equal proportions of cow-dung or horse-dung thoroughly decayed, and turfy peat. These should be chopped, and rubbed through a very coarse sieve, that would let a bullet through. In cutting down old plants, or before submitting them to the process of laying or inarching, they should be turned out of their pots, and put into larger ones; but if they are to be cut back at once, they may be root pruned if necessary, and for this purpose a good deal of the ball must be removed, and, as soon as it is changed, the plant, or rather the stool of the plant, should be placed in a house of rather warmer temperature than a common green-house, for eight or ten days. There are many good nurseries, at

which they have not a single specimen of this very excellent plant. They seem to us to do better upon their own bottoms, than they do worked; for sometimes we have seen a good many that have gone off among a far less quantity that stood. Whether this has arisen from the stocks not being worked in a proper state, or their not being well established, we have yet to learn: we have had many that have stood for years with care and proper culture. Young plants should be kept cool when they have once fairly started. They cannot be better provided for than in a common garden-frame, with a light over them to take off and put on at pleasure. The branches should be thinned if they come too thick, and they want a little regulating and pruning; but it must not be forgotten that the blooms come at the ends of the branches, and therefore that, although branches may be thinned out, none must be shortened till after they have bloomed. When they have done flowering, they may be trimmed into shape, and left to make their proper growth.

ON THE PROGRESS OF HORTICULTURE IN WESTERN NEW-YORK.

BY W. R. COPPOCK, BUFFALO

THERE is probably no subject that has engaged the attention of the staid citizens of the middle and western part of our Union, during the past decade, more than orcharding and gardening, and that too with a business-like discriminating judgment, taking advantage of the present progress of the arts and sciences, and calling to her aid these accessory auxiliaries so far as they have a bearing upon this subject.

A peculiar feature in the character of the American, (and indeed the immigrant soon feels the inductive spirit,) is to possess a *homestead*, whether it may be a town or village lot, or larger plot, to "farm." It must be his; the fee simple is necessary to his comfort and happiness. Hence it is, that in no other country are there so many owners of the soil, and nowhere so few landlords. Herein lies largely the stability of our institutions and the patriotism of our people. The sacredness of these consecrated spots make men jealous of their prerogative, and ardent defenders of them in time of external strife. "Those shocks of corn," said XENOPHON, "inspire those who raise them with courage to defend them."

The spot possessed—the orchard and garden soon take form. The busy housewife, by hook or crook, has her roses and other posies scattered hither and thither in tasteful plats, while the *manor lord* may not so easily, but yet surely plant his fruit grounds. But at the onset lies a difficulty—with what varieties? In tillage, in composting, and in draining the wide spread experience of the past, through the press, has become his; but, in the selection of his fruit, he finds confusion worse confounded—the immensity in the catalogues bewilder his conceptions, and he applies to a friend to aid him in his dilemma. His list reads: apples, Baldwin, Esopus Spitzenberg, Rhode Island Greening, &c. An Ohio cousin, at this juncture drops in, and expresses the greatest consternation at the mistaken selection. "Why," says he, "I and my neighbors have tried these fruits and condemned them long since. Your Baldwins and Spitzenbergs go off with the dry and bitter rot, and my neighbor, Mr. SPRINGER, has twenty trees of the Rhode Island Greening, twenty years old, which he says are not worth twenty cents! You had better take the Cooper, Belmont, and Yellow Belleflower." Hum!! how doctors disagree; our neighbor on the Island says the Cooper is "cornfed," and would not have it within fifty miles of his farm—and as to the Belmont and Yellow Belleflower, they will not ripen in western New-

York." Thus it is we find that all fruits are more or less local in their qualities. The next in the list come pears. Ah! Pears. What a vision comes over us in the category here presented. The Belgian, the French, and the German, and a host of other foreign *Benevolents*, besides no small number of natives meet us at the onset, to puzzle and perplex the novice in these latter days. Who does not revert with peculiar gusto to his luscious fill in boyhood days, of *fox-grapes* and *sugar pears*, aye, and will not soon forget it. Your correspondents have lately been sparring over the "*Orange Bergamot*." How strangely whimsical are opinions at different periods of men's lives. Early associations, boyhood tastes, and even contingent circumstances, all conspire to form and fix opinion—I will not say judgment, in more things than years.

Here I must tell a story, in point, too good to be lost; it occurred some ten or dozen years ago, when the dwarf and standard *Beurres* of the present day, had not got thus far in the west. A farmer desired to plant a collection of pears, having occasionally tasted this fruit in older towns, but without a knowledge of their names, and applied to his neighbor the nurseryman for his *best* trees and advice. "Why, yes sir," he replies, "you want a dozen of my *Orange Bergamot*, there is no other pear worth cultivating." "Well, I will get my ground prepared and call for them." Half a dozen years slipped by before this was accomplished, when the farmer again calls upon the nurseryman for his dozen *Orange Bergamot*. But lo! the spirit of the age has been moving, the "*Horticulturist*" had dawned, the orb of pomonal lore had risen higher in the scale of intelligence, and the *Orange Bergamot* was an out-cast from that nursery. To contend with the worthy Col. and recapitulate his former opinions, his marked enthusiasm for its fame and luscious qualities, was to no purpose,—that pear could not be got there!!

Co-existent with the horticultural press, and the pomological works which have in rapid succession appeared, horticultural societies have sprung into active existence, in nearly every well organised community; and to these associations mainly, may the electric changes in the astonishing increase of fruit grounds, and the enthusiasm evidenced in flora culture, be attributed. These exhibitions are in fact schools, where all may see and learn the mysteries and practices of the art. Here taste is formed, and instructive, free discussions and comparisons are made by every member; points of excellence or faults in fruits, flowers, or vegetables, are shown; and he who runs may read, and although, occasionally, some one may be disposed to apply to himself his neighbor's *thunder*, and detail it through the press as his own fulmination, yet the error is of that pacific nature that no moral harm is done, while the masses may be benefitted.

A novel feature, as adopted by our Buffalo Horticultural Society, I beg leave to mention for the benefit of other kindred societies. During the winter season—that is, between the autumnal and the following spring exhibition, and while the orchard and garden are enjoying that repose which nature demands as a restorer of exhausted fruitfulness, our society meets semi-monthly at the residence of a member, adjourning from one to another, as then agreed upon—assembling at 4 P. M., and partaking of a collation during the evening. *Fruits* in their season, are contributed by the members generally, which are cut and fully discussed, as also the experience and practice of the grower. The subjects of debate are, of course, these only pertaining to the objects of the society, and it is remarkable how quickly the novice becomes enlisted in the subject, and is forthwith posted up on the current pomonal literature of the day. Among these gentlemen communers, may be found our friend of the apple dilemma, as also he of the *Orange Bergamot* experience, neither of whom any longer entertain a doubt as to fit selections for their grounds, or their co-relative merits. These meetings are always full of interest, entertainment, and instruction;

and although often not exceeding, perhaps, a score of members at each, rural art and rural labor, receive an impulse that is quickening, and ever onward. And neither are its beneficial effects confined to narrow limits, for whatever tends to beautify home, or to create by growth a nutritious and healthful fruit or vegetable, is indeed a national blessing. Would that these pacific and domestic associations should more often take the place of political caucuses, and local municipal wranglings.

At the organization of our Society, in '45, there was but one other similar association, (the Aurora,) in this state. Horticulture proper, was confined to the banks of the Hudson, and the neighborhood of New-York city. Fruits in Western New-York, there certainly were, but who could find them? The markets possessed them not, and neither were they aught but common varieties, at best. Yet these stocks have been rendered available. The admirable climate for fruit growth throughout this section of country, has induced the most energetic efforts. Old trees have been *headed-in* and engrafted anew, and within the influences of this society alone, *tens of thousands* of trees have been planted, which are now more or less in bearing. An immediate neighbor has marketed his annual crop of seven hundred barrels of Baldwins—and another a like quantity of Roxbury Russets; these, with numberless orchards scattered around us, have their thousands of pears and peaches, under the best systems of culture.

While these astonishing facts are being annually augmented in our midst, there are those among the more recent planters, who indulge the lacrymose vein for future results. Nevertheless, it is a well settled axiom, founded upon the experience of the past, that *choice and well grown fruits*, however greatly they may be multiplied, have never yet produced a cessation in the demand for them.

Western New-York is doubtless destined to be the great focus of fruit culture. The facilities for transportation in every direction, by railroad, lakes and canals, will enable the orchardist to dispose of his surplus at remunerating profits—while thousands of barrels of our fruit are annually sent to New-York, and then shipped to southern ports—the West Indies, and even to England and France. There are thousands, also, that thread our lakes for the great west. Even Ohio buys our apples, considering them superior to her own, and will gladly take our pears and plums also.

He who plants a tree, improves his estate, while he who plants a thousand, judiciously selected, and systematically taken care of, provides an inheritance having the four-fold benefits of *riches, honors, patriotism, and happiness*. Yours truly, W. R. COPPOCK.

Long-Sight Place, Buffalo, April 15, 1852.

ANNUALS FIT FOR BEDS OR MASSES.

BY AN AMATEUR.

PERSONS who are late in getting their flower gardens in order, or who have at hand very limited means for this purpose, will find it wise to resort to *annuals*. As much the gayest and most beautiful effect is produced by sowing the dwarfier sorts of annuals in *masses* or *beds*, (each plant about four or five inches apart when thinned out,) and as many annuals are too tall, or too coarse in habit, to be fit for this purpose, I send for the benefit of the inexperienced, a list of the best annuals for this purpose.

Mexican Ageratum, (*Ageratum Mexicana*)—Delicate *pale blue*, grows a foot high, flowers all the summer and autumn.

- Golden Bartonia**, (*Bartonia aurea*)—Very fine yellow, cup-shaped flower, a foot high—showy.
- German Asters**—A great variety of shades, of red, pink, and blue, plain and quilled—very ornamental in beds—six to nine inches high.
- Venus' Paint Brush**, (*Caccalia coccinea*)—Flowers scarlet—blossoms abundantly for a long time—one foot.
- Parti-colored Collinsia**, (*Collinsia bicolor*)—Purple and white—very pretty—six inches—should be sown with one-half *Schisanthus*, to keep up the bloom till autumn.
- Dwarf Convolvulus**, (*Convolvulus minor*)—Blue and white; eight inches high; opens only in the morning—blossoms all the season.
- Chinese Pink**, (*Dianthus chinensis*)—Variegated, crimson, purple and white; one foot; the double variety the finest.
- California Poppy**, (*Eschscholtzia California*)—Bright yellow, and *E. crocea*, orange—bloom abundantly; six inches high.
- Palestine Mustard**, (*Erysimum Peroffskianum*)—Deep orange; one foot high.
- Blue Entoca**, (*Entoca viscida*)—Dark blue; six inches high.
- Dwarf Trailing Lobelia**, (*Lobelia gracilis*)—Delicate blue; three inches; blossoms a long time.
- Blue Nemophila**, (*Nemophila insignis*)—Sky blue; very pretty and delicate; five inches—(likes the shade.)
- Spanish Nigella**, (*Nigella Hispanica*)—Pale blue; curious and pretty; nine inches.
- Drummond's Phlox**, (*Phlox Drummondii*)—Various shades, from white, crimson, dark purple and striped; nine inches high; makes fine beds.
- Portulacacs**—various colors—white, purple, crimson, yellow and striped—each sort should be massed by itself—will grow and bloom in any soil; four inches high.
- Schisanthus**—Of several species, the hardiest and best for beds are *S. pinnatus*, (lilac,) and *S. splendens*, variegated—both about one and a half feet high.
- Gilia tricolor**—Blue, white, and yellow, very delicate and pretty, makes excellent beds—growing nine inches high.
- Blue Tweedia**, (*Tweedia cerulea*)—Pretty trailing blue annual, ten inches.
- Rose Lychnis**, (*Lychnis Calis-rosa*)—Flesh color, profuse bloomer, four inches.
- The season is so late, that any of the above may be sown with success till the 10th or 11th of May, (at least north of Baltimore;) and as they may all be had at most of the seed stores, it will still be easy, by their aid, to repair any deficiencies in the flower garden.

AN AMATEUR.

New-York, April, 1862.

THE YUCCAS—AS HARDY ORNAMENTAL PLANTS.

THERE are few plants so ornamental as several of the *Yuccas*, and yet we seldom see them employed in any conspicuous way, in our pleasure grounds or flower gardens. Here and there, perhaps, in the gardens of our curious amateurs, one sees a solitary plant, but beds, groups, and masses, never. Yet there are no plants so altogether satisfactory in many respects, as two or three species of *Yucca* that we can name.

The *Yuccas* are mostly southern plants—the name *Yucca* being a vernacular appellation in St. Domingo. Some of the species, however, are natives of the United States—from Virginia to Florida, and far from being tender, they are hardier than many really northern

plants. *Yucca flaccida*, *angustifolia* and *filamentosa*, bear a temperature of 10° or 15° below zero of Fahrenheit, and *Y. gloriosa* 6° degrees below, without being at all injured.

As they grow with great facility in any rich, light soil, and are easily propagated by division of the roots, there is no reason why they should not be cultivated in every flower garden. April, and the first half of May, are the best season for transplanting the roots.

The Yuccas belong to the *lily* tribe, in the natural system of botany, and the tall stem, (branched like a tapering pyramid,) of superb lily-like flowers, of a creamy white color, that each plant throws up in mid-summer, forms one of the most remarkable embellishments of the flower garden or shrubbery. But a great merit of the Yuccas, over most herbaceous plants, is the constant beauty of the foliage, in fact of the whole plant, all the year round. The general appearance of the plant is not unlike that of the Agaves, or Century Aloes, (to which they are allied,) only the leaves are narrower—being only an inch or two broad. These leaves retain their deep green verdure summer and winter, and being systematically arranged on the plant, and handsome in themselves, they are as strikingly ornamental among the snows of winter, as in mid-summer. A *winter garden*, such as we have several times alluded to in these pages, would, beside evergreen trees, be most appropriately planted into beds or groups of Yuccas, to cheat the season out of its dreariness. We shall notice a few of the sorts most easily obtained at the nurseries, and most suitable for the gardens of the northern states.



THE ADAM'S NEEDLE, OR YUCCA GLORIOSA.

I. *YUCCA GLORIOSA*, or *Adam's Needle*.—This is the largest and most striking of the hardy Yuccas. It is, in fact, an evergreen shrub, growing two to five feet high, with its

woody stem or trunk, clothed with leaves almost to the ground. The end of each leaf is terminated by a dark spine, which has given rise to the popular name of "Adam's Needle." The leaves are broad, stiff, and dark green, and have much of the picturesque effect of those of the Aloe. The flower stalk is generally about four feet high, branching out symmetrically on every side, (see fig. from *Arb. Brit.*,) but in strong plants is frequently much higher than a man's head. The blossoms, which open in July and August, are bell shaped, pale white within, marked by a pale purple stripe on the outside of the petals.

The Adams' Needle is a native of both North and South America, being found wild as far north as Virginia, and as far south as Carthage. Though not growing naturally, farther north than the former state, it is perfectly hardy as far north as Lake Erie—or wherever the peach ripens regularly. About Washington, we have noticed it in the fine pleasure grounds of Wm. Stone, Esq., growing most luxuriantly, springing up and flowering along the sides of the garden walks, with little or no care. About New-York it succeeds best in a perfectly dry subsoil—a deep sandy loam. Where it needs any protection, it is only that of a few branches of evergreens to keep off the sun. There is a variety of *Y. gloriosa* called *superba*—rather rarely seen, even in our best collections, which is still finer—being of taller and more tree-like growth, and bearing a greater profusion of pure white flowers.

II. *YUCCA FILAMENTOSA*, or *Adam's Thread*.—This variety differs mainly from the former, in having no spines at the ends of the leaves, but instead, the foliage is irregularly serrated, and edged with long threads, which hang down two or three inches long. The same popular notion which coupled the idea of ADAM'S Needle with the thorn at the end of the leaves of *Y. gloriosa*, has found a corresponding thread on the leaves of this species. It is a native of Virginia; has stood many winters perfectly uninjured in the open borders of our garden on the Hudson. Its growth, however, seems slower, and it produces flowers more rarely than the Adam's Needle. Still, as both the foliage and flowers are quite ornamental, it is worthy of a place in every good garden. It flowers in September, the blossoms being whiter, and growing more closely to the stalk, than those of *Y. gloriosa*.

III. *YUCCA FLACCIDA*, or *the free blooming Yucca*.—This is one of the most popular, and commonly cultivated sorts in our gardens—growing and blooming with as much ease as a cabbage. It is a native of Georgia—but is as hardy as an oak all over the northern states. The specific name, *flaccida*, is given from the greater pliancy of the leaves, which, instead of being perfectly stiff, like some of the other species, are a little weak, and frequently bend in the middle. This species has no stem or trunk, and the reader may get a good general idea of its appearance when in bloom, by imagining the foregoing figure of *Y. gloriosa*, with the foliage springing directly out of the ground—the leaves, however, being narrower, and more numerous, and the flower stem about half the height. There are slender threads along the edges of the leaves. This Yucca blooms in our northern gardens as freely as the common white lily—throwing up its beautiful pyramidal flower stalks, two or three feet high, about the end of June, and bearing a profusion of fine milk-white flowers, all the month of July. It is one of our favorite evergreen plants, beautiful at all seasons.

IV. *YUCCA ANGUSTIFOLIA*, *the Narrow Leaved Yucca*.—A fine hardy species, found by NUTTALL on the banks of the Missouri—and grows and blooms in our gardens exceedingly well. The foliage is long and narrow, edged with threads, and quite stiff. The leaves spring out of the ground without a stem, like those of the last variety. The

flower stalk is straight, and not branched, like the preceding sorts, the flower bells more oblong, and the flowers a pale greenish white. It blooms at mid-summer, and is a very distinct and ornamental species. Messrs. Hogg, of New-York; have, we believe, cultivated it with success in the open border, for many years.

There are several other species of *Yucca* which are less known, but which would doubtless succeed in our gardens. *Yucca draconii*—the Dragon Yucca, a native of Carolina, growing eight or ten feet high, which is hardy in England, would no doubt be so here; but though it is to be found in many of our green-house collections, we do not hear of any one having made trial of it in the open air. There is a variety of *Y. gloriosa* with striped leaves, which is very ornamental. *Y. stricta*, and *Y. glaucescens* are an interesting species, natives of the southern states, that would well repay the labor of cultivation.

We have said enough, however, to call attention to this really noble genus of evergreen plants—whose superb flowers and striking foliage, render them more valuable as ornaments to lawns, gardens, or rock work, than almost any others that we could name. As they are mostly natives of the sea shore, they are also especially valuable to decorate the grounds of the marine cottages and villas that are springing up at Newport, and other sea-side watering places. Most of the sorts we have described may be had at very moderate prices, of our leading plant growers, and nothing but ignorance of their real merits, prevents their being much more generally cultivated.

MESSINA—A COUNTRY SEAT ON THE HUDSON.

(SEE FRONTISPIECE.)

WHOEVER has not seen the country seats on the upper side of the Hudson, knows nothing of the finest specimens of rural residences in America. There are in the neighborhood of Boston, many beautiful villas and cottages, designed in admirable taste and kept in the highest order, that are indeed admirable in every respect; but they, like more solitary specimens of the same kind, in the environs of many of our cities, are only suburban residences of a few acres. There are, in various parts of the country, many gentlemen's large seats, well laid out, with lawns, pleasure grounds and gardens, in a simple and unpretending manner, highly creditable to the possessors. But nowhere in America, are there to be found country residences, where nature has done so much to assist man in his attempts to create a beautiful home, as in what may be called the upper terrace of the Hudson. This includes a hill of land on the eastern shore, extending from Hyde Park to Hudson city, a distance of about 50 miles.

The peculiar advantages of this part of the river are these: First, the finest mountain and river views in the country—the river being the Hudson, in its loveliest portion—sometimes two or three miles wide—indented in outline, and varied by numerous islands; the mountains being the Catskills—their highest summit 3,000 feet high—near enough to give a character of grandeur to the scene, and distant enough to possess that blue haze of atmospheric distance, which makes a mountain a bit of poetry, instead of a bare reality of rocks and trees in the landscape. Second, they have the advantage of having been held as country seats since the first settlement of the river—with much of the fine natural beauties of wood and water preserved and heightened by the fostering spirit of taste, rather than despoiled by the avaricious spirit of the mere tiller of the soil.

For almost the entire distance of this fifty miles, the east bank of the Hudson is one line of country seats—varying in extent from fifty to 500 or 600 acres. Instead of having the same general features of interest and beauty, nothing is more striking to the picturesque tourist, than the highly *varied* character of these places. Every mile seems to present new groupings of headland and foreground, some new combinations of wood, water, and mountain—so that no one who has seen one or two places, can imagine with certainty what will be the aspect and picturesque character of the next residence. The enchanting beauty of the Hudson itself is varied and heightened too by its peculiar life and animation. Snowy sails, sometimes singly in calms, and sometimes floating along in the light breezes like troops of white swans; swift steamers freighted with throngs of busy and curious people; huge clusters of freight barges, loaded down with the produce of whole counties; and finally, stealing along under the high wooded banks, the river railway, whose trains fly along between the commercial and political capitals of the state at the rate of 30 to 50 miles an hour—all of these gives to these finest seats on the Hudson a completeness of interest which the traveller looks in vain for anywhere else in America.

Among the finest of these residences, Montgomery Place, Blithewood, Ellerslie, Hyde Park and others, have been already described, and some of them illustrated in various other works of ours. Persons wishing to see the finest specimens of landscape gardening in the country, naturally go to these places, to study them as the best examples of the art, and there are few places, out of England, where the lover of embellished homescenery, can find so much gratification and instruction.

About the center of this upper terrace, lies Messina, the seat of the late JOHN R. LIVINGSTON, Esq., a sketch of which we present in our frontispiece this month. This house is one of the noblest in its proportions on the whole river, and is worth an examination as a specimen of a first class mansion in the country. It was built by Mr. LIVINGSTON, after his return from France, some years ago. He was so much pleased while there, with the residence of BRAUMARCHEAIS, near Paris, that he determined to model his own home upon it. This accounts for the air of a French Chateau, which we discover in some of its features. The design was, however, really drawn by an English architect, BRUNEL, the celebrated architect of the Thames tunnel—who came out to this country and erected two or three residences for different members of the LIVINGSTON family. The plan of the interior is spacious and elegant—the rooms large and finely proportioned, uniting some of the best features of both the English and French residences.

Finely varied and extensive grounds surround the mansion at Messina. There is an abundance of foliage and fine old trees, the scenery is beautiful and the neighborhood most picturesque and interesting. Though not at present in the high condition of some of the places we have just mentioned, (owing to the want of personal interest, consequent upon the declining health of the late proprietor,) it could readily, in the hands of a person of taste and fortune, be restored to its former high keeping. As it is but rarely one of these first class residences are to be obtained, we believe we shall render a service to some of our numerous readers who are annually settling in the country, by drawing their attention to a site that has long been considered one of the best in the Union.

REVIEWS.

COTTAGE RESIDENCES: or a series of Designs for Rural Cottages and Cottage Villas, and their Gardens and Grounds; adapted to North America. By A. J. DOWNING. Illustrated by numerous engravings. Fourth edition, revised, enlarged and improved. New-York: John Wiley, 18 Park Place, 1852.

It is neither fitting nor necessary, that we should say anything as to the merits of this volume. The circulation of several extra large editions, and the results all over the country in the shape of numberless cottages and villas, erected from the designs it contains, are, perhaps, sufficient proof that it has both found favor in the eyes of the public, and has exerted a considerable share of influence in the formation of the popular taste for rural architecture.

The present edition, just issued from the press, will be found to contain several new designs for cottages, lodges, &c., with considerable additional matter, and the original text entirely revised throughout.

The most important addition, however, is a chapter entitled, "*Further hints on the Gardens and Grounds of Cottage Residences.*" In this chapter we have given general directions, accompanied with plans, for the laying out of plots of ground, from the smallest *parterre* of flowers, to the largest area in which a cottage may usually be supposed to be placed. The different styles of flower gardens—the flower garden consisting of beds and masses or turf—the geometrical flower garden—the Elizabethan flower garden—the English flower garden and shrubbery—the labyrinth of shrubs—and various French and German plans for cottage gardens and grounds, are explained and illustrated in a way that we trust will be found of practical value.

This part of the work is, we think, particularly needed by ladies, who, for the most part, take in hand the laying out of the ornamental grounds of their cottage homes; and, in doing so, are frequently at a loss for hints and sketches, which, if not precisely adapted to their own grounds, might at least suggest to their own minds, such variations as would exactly answer the desired purpose.

We give, as a specimen of this part of the work, the following extract and plan, which may be in season to interest some of our readers now busy with the arrangement of their ornamental grounds.

"In presenting all these various modes of arranging flower gardens, we must be allowed to say that the modern taste of discarding any set flower garden, and, instead of it, arranging the beds of choice perpetual blooming plants, in and around a small *lawn*, in graceful and harmonious forms, is by far the most satisfactory in the majority of cases. It is especially so in all small places, where the ornamental grounds are too limited to allow of separate scenes. In such cases, the grouping of flowers round a lawn, having only one or two colors in a bed, heightens the beauty of the lawn itself, while the flowers are enjoyed, perhaps, more than in any other way.

"Fig. 102 is a design of our own, of this kind, which has been carried out and found extremely pretty and satisfactory. In this, A. is the dwelling-house; B. the conservatory, (a detached building one side of the lawn;) C. the lawn; D. flower beds; E. vase, fountain, sun-dial, or rustic basket filled with flowers. Round the whole runs a boundary belt, F. of trees and shrubs—shutting out all that portion of the grounds not strictly ornamental. In practice, it is found that small *circular* beds, about three feet in diameter, grouped in twos and threes, (like those on the left of D.) are more convenient and

effective than the irregular beds; partly because a three feet circle is large enough for a mass of a single color, in a small garden, and partly because a circular bed, like a tree, always looks well, either alone, or grouped with other circles. It is also adapted to any position, which an irregular bed is not.

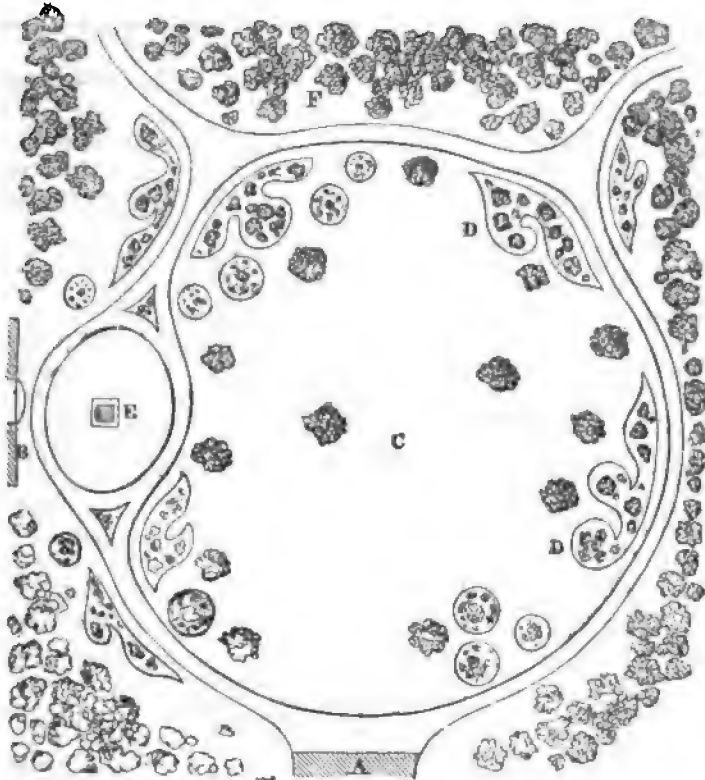


Fig. 108.

"In order to give the lawn C, a more picturesque character, we have introduced a few single specimens of trees, such as grow with beautiful forms when standing alone. We may mention, as peculiarly adapted to such sites, the Chinese Magnolia, (*M. conspicua*, and *M. soulangiana*,) very hardy and beautiful; the Weeping Ash, Weeping Beech, Purple Beech, and Weeping Silver Lime, all striking in habit and foliage; the Ash Leaved Maple, or Negundo, for its lively green foliage; the Virgilia of Kentucky, with snowy white blossoms; the Virginia Fringe Tree, ect. As evergreens, to plant them singly we may enumerate the Deodar Cedar, the Norway Spruce, the Himalayan Spruce, the Irish Yew, and the Silver Fir. A lawn and flower garden combined, and planted in this way, would have a tasteful and beautiful effect in any situation, or in connection with a residence in any style." p. 204.

Foreign and Miscellaneous Notices.

THE GLADIOLUS.—The genus *Gladiolus* now comprehends many brilliant species and varieties, and is fast increasing in interest with the floral world. The variety of colors, together with the beauty of its varied stripes and markings, and its graceful habit, recommend it as well worthy the attention of the florist or amateur. Like most bulbous plants, *Gladioli* thrive and flower with less care than most florist's flowers. Being comprised of early and late kinds, they blossom at various seasons of the year: the earliest sorts commence flowering in June when planted in the open air, and many of the late kinds continue in blossom up to the very approach of winter. They are perfectly hardy, and may be grown in any common garden soil not retentive of moisture; but should the soil be heavy where they are intended to be planted, it should be removed to the depth of about two feet, and replaced by a light rich soil, composed of a mixture of sandy loam and leaf-mold, or sandy loam and peat, allowing six or nine inches for the drainage.

The *Colvillii* kinds come very early into flower; they are of taller growth than others of the early sorts, and are of erect, slender habit. They include *Colvillii*, *Colvillii blandus*, *Colvillii superbus*, *odoratus*, *tristis*, and others; they are succeeded by a more numerous class, which generally commence flowering about two weeks later; the latter are composed of varieties varying from a foot to a foot and a half in height; they comprise a great diversity of colors.

Other varieties are later, and mostly commence flowering about the end of July, or in August; they are of stronger habit than the preceding kinds, and exceedingly rich, though not so varied in their colors as the earlier sorts. They produce a longer succession of flowers; many of them throw up lateral spikes of bloom to the latest period of autumn; and vigorous plants, lifted and potted, continue to bloom during the winter.

The varieties of *Floribundus*, *Gandavensis*, and other late tall-growing varieties, chiefly come later into flower than most of the above. Of these, *Splendens* is a very noble variety, of a rich orange scarlet, with much larger flowers than *Gandavensis*. *Pittacinus sanguineus*, is a good dark one. *Brenchleyensis* is another splendid addition to this class.

For pot-culture the *Gladiolus* is very suitable, making a beautiful show among other plants in the green-house or conservatory, and where a large collection is kept, some may be had in flower nearly all the year round. In potting, the roots should not be cramped; they require a fair portion of pot-room. Sandy loam and peat, or leaf-mould, or any light rich soil, the pots being well drained, suits them well. When

first planted, as is the case with most other bulbs, they will not bear forcing; they should be allowed to progress gradually, by placing them in a cool frame or pit, and keeping the soil in a tolerably dry state till they have made considerable growth; after which they may be brought into the green-house, or where they are required to flower. They make fine specimens when planted several bulbs in a pot.

This lovely tribe of plants opens a wide field for the hybridist, and the amateur would find it an interesting engagement, in which his skill and time would be richly rewarded. In endeavoring to obtain crosses, the choice should not only be directed to the color and size of the flowers, but chiefly to their expanding habit and breadth of petals; for although there are many fine sorts which do not possess each of these latter qualities, yet they should be the points to be aimed at in our progress towards the improvement of the tribe. Seedlings of the early varieties usually flower the second summer after sowing, and the later varieties the third.—*Beck's Florist.*

AN ACRE OF HOLLYHOCKS.—Till within these last few years this flower was used as an ornament in the plantation or shrubbery border only; but it is now becoming an especial favorite with the professional and amateur florist, and bids fair successfully to rival, if not to outvie the *Dahlia*. The particular sorts selected for this purpose are of a character and family entirely different to those formerly grown. Instead of the bell-shaped blossom, showing a large eye, the new and superior varieties have a semi-spherical flower exceedingly double, with closely serried petals, and a flat regular guard-leaf; the blossoms are so thickly packed around the stem, that the green leaf can scarcely peep between them, and in the best grown plants it is almost entirely hid. These properties have, in the present season, been obtained in great perfection by Mr. Chater, of Saffron Walden, in whose nursery-grounds, consisting of about six acres, more than one-sixth is entirely devoted to *Hollyhocks*, 6,000 of which are now in splendid bloom; and Saffron Walden may well be proud of such an extensive exhibition. But it is not only in the vast number and variety of colors, but in individual excellence, as has been acknowledged by the gentry and florists who have inspected his collection within the last fortnight, that Mr. C. may fairly challenge the world to compete with him. The size and beauty of color displayed in his seedling *Comet*, which is a fine ruby red, one would think, at first sight, could scarcely be surpassed. Equally beautiful in their several different characters and colors are his seedlings,—*Enchantress*, deep rose; *Rosea grandiflora*, light rose; *Attraction*, elegantly

veined puce and silver; Model of Perfection, white with chocolate ground; Commander-in-chief, remarkable for immensely long spikes of flowers towering nine feet high; the Queen, a delicate blush; Aurantia, salmon-color; Pulchella, roseate; Pallida, lilac; Magnum Bonum, a rich glossy maroon; Snowball, purest white; Black Prince, sable black; Formosa, dark claret, with palmated leaves; Mulberry Superb; Delicata; Atro-sanguinea. Mr. C. has exhibited this season at Chiswick some of his beauties, grown especially in pots for that occasion; also at the Royal Agricultural meeting at Norwich, where he was awarded a prize for his Seedling Comet, and a prize for the collection; and at the South London Floricultural meeting in the Surrey Zoological Gardens he obtained a medal. A visit to these superb and elegant flowers would be highly gratifying to every lover of Nature in her gay and brilliant forms.—*Beck's Florist.*

COLD SPRING IN ENGLAND.—Up to the 18th of this Month, March, there had been for many years no spring so late and cold as this. In these respects it was even more striking than that of 1845. Continually frosty nights, little sun, no material rise of the thermometer during the day; from these causes, the temperature of the earth, which is a better indicator of weather than that of the air, was actually lower than it had been within any period during which registers to which we have access, have been kept. It is true, indeed, that in March, 1845, the earth, 2 feet below the surface, was on one occasion as low as 36 degrees, and that in this year the geothermometer had not fallen lower; but the mean of the month, at 2 feet under ground, was up to that time, lower than in 1845, by more than half a degree. The following return proves this.

The temperature of the earth in the garden of the Horticultural Society, for the first 18 days of March, has been as under—

		Mean of March.			2 feet.	
		1 foot Deep.	2 feet Deep.	3 feet Deep.		
March	1	37.5	38.5	41.0	1859.....	41.46
	2	38.0	39.0	41.0	1860.....	41.93
	3	37.0	38.0	41.0	1861.....	41.71
	4	37.0	37.0	40.5	1862.....	42.24
	5	36.0	37.5	40.5	1863.....	39.78
	6	36.0	37.0	40.0	1864.....	45.55
	7	35.5	36.0	40.0	1865.....	41.03
	8	36.5	36.5	40.0	1866.....	43.72
	9	37.5	37.0	40.0	1867.....	43.70
	10	38.5	37.5	40.0	1868.....	42.53
	11	38.5	37.5	40.0	General av'ge.	41.74
	12	38.5	38.0	40.0	Min. of March, 2 feet.	38.5
	13	39.0	38.0	40.5	1869.....	39
	14	38.0	38.0	41.0	1870.....	39
	15	38.5	38.0	41.0	1871.....	40
	16	39.0	38.0	41.0	1872.....	38
	17	40.0	39.0	41.0	1873.....	44
	18	40.0	39.0	41.0	1874.....	38
	37.77	37.75	40.5	1875.....	42.50	
				1876.....	42.50	
				1877.....	40	

Since the 18th the sun has gained some strength, and the temperature of the air by day

has not been lower than 47 degrees, while on the 22d and 24th, it rose to 66 degrees. Still vegetation is almost torpid; buds are swelling very slowly, and the early blossoms have for the most part, a shrunken, half-starved aspect. The continued low temperature at night, fluctuating between 25 and 28 degrees, explains this; for so little effect has the sun yet produced, that at the present moment the earth 2 feet under ground, has not gained more than 42 degrees, and this maximum still remains less than the mean of 1844, 1846, 1848, 1849, and 1850.—*London Gard. Chron.*

MACARONI AND VERMICELLI.—In writing from Naples, Mr. WEED takes the following notice of the manufacture and use of macaroni and vermicelli in Italy:

Italy, you know, abounds in macaroni and vermicelli. The making and eating of these articles enter into the occupations and appetites of every city, town and village. It is used in many forms of which we have no knowledge. It enters into all their soups and pastry, and into many of their meat dishes. And, though I started with many prejudices, I must say that these dishes are invariably good.

Naples boasts of making the finest macaroni in Italy. I visited a small town at the foot of Vesuvius yesterday, where thousands of bushels of wheat were being made into macaroni. The wheat is first subjected to a kiln-drying process, being spread on tiled roofs which are heated gently from fires within and from the sun without. It is afterwards ground coarsely, mixed with water and kneaded into paste, which is subjected to action by pounders somewhat resembling those used in driving piles. The paste is then forced through machinery which gives it its form and name, some coming out macaroni and some vermicelli, each taking, however, many varieties of form, some long and thin like paper, some like ribbons, some in balls, and others like beans, peas, and even as small as mustard seed.

At Genoa, from which place I think we get most of our macaroni, saffron is put into the paste, which gives it its yellow tinge. Here it is nearer the color of bread. Not only the Italians, but all who visit Italy, become very fond of this description of food. The impression which I think prevails in America, that macaroni and vermicelli manufacturers are not particularly clean, is erroneous. There is no good ground of objection to this food on that account.

RICE PAPER.—The plant from which the Chinese Rice-paper is made, has long been unknown, and many conjectures have been hazarded regarding it. There can be no doubt that the paper is composed of cellular tissue, and is prepared from the plant without any process of maceration. In the East Indies it would appear that a kind of Rice-paper is procured from the stem of *Echynomene paludosa*, and it is probable that many plants with abundant pith

might be employed in a similar manner, in the same way as the Papyrus was employed in ancient times. Stems of the Indian *Æschynomene* are to be seen in the Museum of the Edinburgh Botanic Garden. Chinese Rice-paper, however, comes from a totally different plant. M. Berthold Seeman, who accompanied Her Majesty's ship *Herald*, gives, in the Kew Miscellany, the following account of his attempt to find the plant in China. He says:—

"It was my particular desire to obtain the plant of which the Rice-paper is made. On my arrival all I could learn was, that the paper was manufactured from vegetable pith; respecting the name of the plant, its vegetation, and native province, the most contradictory statements prevailed. My first aim was to discover the vernacular name of the plant; after I had succeeded in obtaining this, through the aid of an intelligent missionary, Mr. Vogel, I experienced no further difficulty in collecting information, and in finding a Chinaman willing to procure specimens. The plant grows abundantly in the province of Yunnan, and in the work of Li-shi-chin there is a figure and description of it. Mr. Williams, the well-known author of "The Middle Kingdom," has kindly rendered that account into English for me, and the following is a transcript of his version:—"The Tung-toh-muh, or as it is sometimes called, Tung-tsau (i.e. hollow plant,) grows on the sides of hills. Its leaves resemble the Castor-oil plant (*Ricinus communis*, Linn.) the stem is hollow, and has in its heart a white pith, which is prized for its lightness and whiteness, and collected in order to make ornaments for women." K'noh-poh says: "It grows in Kiang-nan, is about 12 or 14 feet high, and has leaves which are large and fleshy like those of the *Nelumbium*. In the stem is a very white pith. Gardeners now sow the seed, and also transplant the plant. If the stem is cooked with honey, and mixed with preserved fruit, the taste is sweet and pleasant." Li-shi-chin says: "The stalks of those plants which grow in the hills are large, several inches in circumference. The taste and virtues of this plant are sweet, cooling, and innocuous. It aids the secretions, it stops diarrhoea and excess of urine, and helps the expectorations. A tincture of the burnt stalks reduced to power is good for lock jaw."

M. Seemann, from the description given, and the wood cut annexed to it, thought that it was a Malvaceous plant. But it now appears that the plant belongs to Araliaceæ, and it has been called by Sir William Hooker, *Aralia papiæra*. A figure is given in the Kew Miscellany, for Jan. 1862. The leaves of the plant are large and radiating, lobed at the margin, and somewhat resembling the leaf of a large Sycamore, the pulp is in large quantities, and seems to be hollow and to descend in the center.—*J. of H.*

SAGO MANUFACTORY AT SINGAPORE.—The unprepared sago is imported from the neighboring island of Borromeo, and consists of the pith

of a short, thick kind of palm. The tree is cut down when it is seven years old, split up from top to bottom, and the pith, of which there is always a large quantity, extracted; it is then freed from the fibres, pressed in large frames, and dried at the fire or in the sun. At this period it has still a yellowish tinge. The following is the manner in which it is grained:—The meal or pith is steeped in water for several days, until it is completely blanched; it is then once more dried by the fire or in the sun, and passed under a large wooden roller, and through a hair sieve. When it has become white and fine, it is placed in a kind of linen winnowing-fan, which is kept damp in a peculiar manner. The workman takes a mouthful of water, and spurts it out like fine rain over the fan, in which the meal is alternately shaken and moistened in the manner just mentioned, until it assumes the shape of small globules, which are constantly stirred round in large flat pans, until they are dried, when they are passed through a second sieve, not quite so fine as the first, and the larger globules separated from the rest.—*A Woman's Journey Round the World.*

SCIENTIFIC GLEANINGS.—The *Hieracium plumbeum* of Fries has been ascertained to be a native of Britain, by Mr. J. Backhouse, Jr., of York. It grows on Falcon Clints, in Teesdale. Mr. Backhouse, who has had an opportunity, during the past summer, of examining specimens of the Norwegian *Hieracia*, describes it as nearly allied to *H. casium*, but differing strongly in having more truncate involucre, with broad based acuminate apiculate scales, of a dark color, margined with green; also, in the involucre and peduncles being almost or entirely destitute of stellate pubescence. *H. casium* from the same place, and from Cronkley Scar, has narrow, acute, involucreal scales, and usually a large amount of stellate down on the peduncles and involucre. *H. plumbeum* flowers very early (about July,) while *H. casium* is in perfection, or nearly so, in September. In cultivation the plants become still more dissimilar.—*Report of Edinburgh Botanical Society.*

Professor Simpson recently communicated to the Botanical Society of Edinburgh the results of some experiments relative to the growth of Alpine plants, after having been kept artificially covered with snow in an ice-house for many months. Seed and plants, when kept in this way during winter, and then brought into the warm air of summer, were found to germinate and grow with great rapidity. In Arctic regions the rapid growth of the plants during the short summer is well known; and the importance of similar experiments being made on the different kinds of grain was suggested. The rapidity of the harvest in Canada and other countries, where the cold lasts for many months, seems to indicate that if grain was kept in an ice-house during winter, and sown in spring, there might be an acceleration of the harvest. The subject

is certainly deserving the attention of cultivators.—*Ibid.* [A writer in the *Scotch Gardener* recommends to try this plan with the *Rhododendron nivale* of the snowy summits of the Sikkim Himalaya.]

The *Pe-la*, or *Insect-wax of China*, has been largely used in China since the thirteenth century, and has been occasionally imported into France and Britain for many years past, but its natural history is still very imperfectly known. Its chemical properties were investigated in 1848, by Mr. B. C. Brodie, of London, who showed that, even as it is met with in commerce, it is nearly in a state of chemical purity, and that it most closely resembles *cerin*, the base of bees-wax. The *Pe-la* is perfectly white, translucent, shining, not unctuous to the touch, inodorous, and insipid. It melts at 100° Fahrenheit. It is found adhering to the branches of certain shrubs, whence it is collected yearly in June. It seems to be produced by myriads of minute insects, which either excrete, or are changed into, the wax. Dr. McGowan, Medical Missionary at Ningpo, is inclined to believe that the insect undergoes what may be called *aceraceous degeneration*, its whole body being permeated by the peculiar product, in the same manner as the *Coccus cacti* is by carmine.—*Report of Royal Physical Society.*

In the village of Gries, four leagues from Strasburgh, stands a tree of *Æsculus Hippocastanum*, one of the oldest in the country, certainly dating farther back than the year 1680. At a foot above the ground it measures twelve feet in circumference. The peculiarity of this tree is, that from an unknown period it has annually blossomed on *one side alone*, one year on the west side, the next only on the east. The bare half does, indeed, present a bunch of flowers here and there, though seven-eighths of the branches are without blossom; but the leaves exhibit a more vivid green hue, while those on the flowering half of the tree are of a dull, unpleasant color.—*Flora.*

Those who have paid little attention to the Mosses, can hardly imagine the great variety of beautiful forms they present to the inquiring eye; and indeed, excepting the Ferns, there is, perhaps, no tribe of plants which look prettier than a collection of these in a dried state, and neatly fastened to small sheets of paper. We mention this just now, because a very nice series of specimens of the British Mosses, in

course of publication, by Mr. F. Y. Brocas, of Basingstoke; and these would form an excellent ground-work for those who might wish to begin to collect and study these interesting lowly forms of vegetation, and would also furnish materials for those who could only find leisure to study—not to gather for themselves. The two fasciculi published, containing each fifty species, consist of excellently preserved specimens, and, as far as we have observed, very correctly named.—*M.*

It appears that the flowers of the *Victoria regia* evolve a considerable amount of latent heat during the period of their development, similar to what has been observed to occur in *Caladium* and other Araceous plants. M. Otto, of Hamburg, has observed that a thermometer plunged into the *Victoria* flower at the moment of expanding its anthers, (7h. 11m. p.m.) rose to 21½° R., the temperature of the house being 17¼° R., and that of the tank 16¼° R. Upon being sunk below the anthers, a gradual decrease took place. On another occasion, the temperature of the air being 18° R., that of the water 16½ and the thermometer at 16¼° R., in the course of fifteen minutes the latter rose, in the flower, to 32¼° R. These experiments were made at the suggestion of Prof. Lehmann, who thought he had formerly noticed an increase of temperature to occur in the flowers of *Nymphaea alba* during their development.—*Hooker's Journal of Botany.*

ANALYSIS OF THE STRAWBERRY.—B. KIRTLAND gives the following analysis in the Family Visitor, showing a large amount of potash in proportion to other constituents, much silica, and more magnesia and common salt, than are usually found in other fruits. One hundred and sixteen grains of the ashes were taken, prepared from the leaves and stalks immediately after they had borne a moderate crop of fruit.

Silica,	6.117 grains.
Charcoal and sand,	3.101 do
Perphosphate of iron,	1.515 do
Perphosphate of lime,	26.519 do
Magnesia,	8.403 do
Sulphuric acid,	1.469 do
Phosphoric acid,	6.870 do
Chlorine,708 do
Potash,	33.154 do
Soda,	2.790 do
Carbonic acid,	23.008 do
Organic matter and loss,	1.739 do
	116.000 do

Domestic Notices.

WINTERING TEA ROSES IN THE OPEN AIR.—

Every body fond of flowers knows that there is nothing in the "wide" floral "world" comparable for refined beauty and loveliness to a fine tea rose, in fact to *tea-roses* altogether. South of Pennsylvania, they are grown as easily as common garden roses, bearing all ordinary winters with impunity. But north of Philadelphia, the tea-rose is too tender to grow all the year round out of doors—and is therefore for the most part confined to the green-house or frame.

A little experiment that we made last winter, with a bed of tea-roses, containing a couple of dozen plants, has turned out so entirely to our satisfaction, that we think it removes all the difficulty of making permanent beds of tea-roses at the north. The temperature having been so unusually severe, and the plants only one season planted, the result is all the more satisfactory. We make the process known for the benefit of floral devotees.

The bed was oval. We covered it early in November with tan-bark, one foot thick—which nearly covered all the stems—the longest being bent down. Over this coat of tan, to keep it dry, (that being the main point,) we put three bundles of rye-straw—gathering it in the center to a ridge or point—so as to shed off the water entirely; no further attention was paid it. When the straw was removed in April, the tan was found perfectly dry—on removing the tan the plants were found in perfect order—even the leaves of the last autumn's growth as fresh as when covered. If any of our readers can invent a simpler or more effectual mode of preserving a bed of tender plants, we should like to hear from them.

REMOVING EVERGREENS.—Those who are behind hand with their planting, may take our word for it, that there is no *season* for removing evergreens, in the ordinary way, like *this*—just as the buds are swelling and the roots pushing out young fibres. There are fifty different opinions about the best time to plant evergreens. The above may be taken as ours, and it is not given without plenty of trials of other modes. We except, of course, moving the trees with a

large frozen ball in winter—but one which is only occasionally practiced.

APPLE TREE BORERS.—Sir: In New-England there is no greater pest to the cultivator, than the Apple Tree Borer. In some parts it has destroyed whole orchards. Many persons, in fact most persons, fold their hands in despair, and let the trees die. I have done better by the help of the Horticulturist—having profited by the directions given by the Editor three or four years ago. These directions are the only ones that I have seen that strike directly at the root of the matter—that is to say, by preventing the Borer in a winged state, the last of May and the first of June, from *depositing its eggs* in the bark of the tree, and thereby laying the foundation of a new brood. The old mode of killing the borers, by pushing wires into their holes in the trunk of the tree, is good so far as it goes—but it only goes half way. Since, if you succeed in killing all the grubs in that tree, a fresh set may fly over from your neighbor's trees, as soon as the grubs hatch out, and lay their eggs in yours. The plan recommended by the Editor of the Horticulturist, does the whole business; as many new subscribers whose trees may be infected, have not that prescription at hand, I shall beg leave to repeat it.

First. Kill all the grubs in the trunk of the tree, by pushing a wire up the holes as far as possible. Then take a pail—fill it half full of thin soft-soap, and stir in enough tobacco water to make it two-thirds full. Having first scraped off any loose bark, next apply this tobacco and soap paint with a stiff brush, to every part of the trunk, and larger part of the limbs—putting it on especially thick at the "crotches," and the base of the trunk—the places where the borer likes best to deposit its eggs. If this is done early in May, I can answer from experience for its efficacy. No Borer will deposit her eggs in bark coated over in this way. All the merit of the prescription belongs to you the Editor, and not to your humble servant, A. R. C. *Rhode-Island, April, 1862.*

[We may add to the foregoing, that the soap and tobacco mixture, painted over the trunks

of other trees, as the ash, peach, &c., infected with Borers, is equally effectual. The main point is to get it on before the insect comes out in a winged state—and south of Baltimore that is usually before this time. North of that point, the early part of May will answer. Ed.]

VARIETIES OF BOX—MR. DOWNING—Dear Sir: Permit me, through the Medium of your ever welcome Horticulturist, to make a few inquiries concerning the different species and varieties of the Box. I have not been able to find in your pages anything about it, excepting the manner of propagating the dwarf variety—which I suppose to be the common Box, (*Buxus sempervirens*), which I have seen four and a half feet high, and perhaps thirty years old—and which is used for borders in this vicinity. Cannot you give us a description of all the known varieties? Is not it one of our finest evergreens, and worthy a special chapter in the Horticulturist? and will you not tell us the name of the Hawthorn used for hedges in England, and described by Mr. Olmstead in his "Walks and Talks"—and whether it can be procured at our nurseries, and oblige yours truly, A NOVICE. *New-England*, April 5, 1852.

ANSWER.—There are four or five varieties of the common Box, (*Buxus sempervirens*), cultivated in this country. The Dwarf Box, (*B. S. suffruticosa*), in common use for edgings, is the least hardy of all, the foliage being always browned, and the ends of the shoots injured by severe winters, all over the northern states.

The Tree Box, (*B. S. arborescens*), which has leaves about twice as long as those of the Dwarf Box, and grows from 2 to 10 or 12 feet high, is much hardier, and bears 10° below zero without injury. The *Gold-striped* Tree Box, and *Silver-striped* do., are varieties very ornamental in their foliage, and equally hardy.

But the hardest of all is what is known as the Green-tree box, (*B. S. angustifolia*.) It has shining dark green, lanceolated leaves, more narrow and pointed than the common Dwarf Box, or the other sorts of the Tree Box—resembling more the foliage of the common Roman Myrtle. This Box will bear uninjured, a temperature that destroys or injures badly, both the Dwarf Box, and the other sorts of the Tree Box, and as its foliage is of a richer tint than any of the others, and as it

may be kept in shape very easily, by the shears, it ought to take the place of the Dwarf Box for edgings, in the United States. This variety is more common about Washington, and in Maryland, than in northern gardens. It deserves to be cultivated more generally.

GRAPES IN VINERIES.—Dear Sir: As a reason for troubling you to do me a favor, my only apology is, that I am a lover of horticultural pursuits, an original subscriber to your Horticulturist, and that I have endeavored to extend its circulation by inducing some of my friends to subscribe for it, whom I knew would be benefited by taking it. I have received great and essential benefit from it myself; and perhaps it is owing more to that than any other cause, that I was induced, in the spring of 1849, to build me a grapery, setting out my vines the middle of May, in that year. About one half of them were two year old plants, in good sized pots. They all grew well the first season, and have continued to do so since. In 1850, by crooking the older vines in large pots, I allowed them to bear each a few bunches of grapes, without hurting the vines at all. In every such case, a fine strong rod, coming from below the crook, was sent up to the top of the house, and this was the bearing wood for 1851, the old rod in the pot being cut off.

In 1851, being the third season, the vines were allowed to bear a fair crop. The fruit ripened well in all but two instances, where I had allowed a little too much to remain. But I had as fine Muscats of Alexandria, and in perfection, as you will find in Mr. Allen's graperies. Also, I had in perfection, Black Hamburgs, Wilmot's New Black Hamburg, St. Albans, Grizzly and White Frontignans, Royal Muscadine, White Nice, Chasselas of Fontainbleau, and Syrian.

I notice what Mr. CLEVELAND says in the last number of the Horticulturist, on the subject of early over bearing. This is the great danger. His suggestions are important, and if attended to, may benefit those who are now constructing graperies, or who may do it hereafter. My vines are all numbered, and I have from the first kept a particular account of the state and condition of each vine, its growth, annual product, &c.—indeed, everything about it. Thus far my vines have done remarkably well—but I want to see

how they will do the coming season, which I think will test them. If life is spared, I will promise you next autumn, as full an account as you may wish of my cultivation, and its results for 1850, 1851, and 1852. I do not expect to bring anything new to light, but facts I can give you, which, if I had had them when I first began to cultivate the grape, would have been of great benefit to me. In the construction of my border, and in the cultivation of the grape, I have followed in the main, Mr. ALLEN's book, excepting that I put no dead animals into the border. P. Hartford, Ct.

CRESCENT SEEDLING STRAWBERRY.—EDITOR HORT: In answer to numerous inquiries per mail, permit me to say the "Crescent Seedling" Strawberry plants, can be obtained of the originator, HENRY LAWRENCE Esq., 3d Municipality, New-Orleans, at \$8.00 per 100.

Mr. LAWRENCE writes me, under date of the 7th inst., saying, "I have had strawberries on my table since the 4th of January last, and at the present time have them in the greatest abundance, the average weight being *one ounce*, and about three inches in circumference; this will continue *without intermission*, until the middle of August."

As soon as my plants exhibit their habit of bearing in this northern climate, I will report the same to your readers. R. G. PARDEE. Palmyra, N. Y., April 16, 1852.

HORTICOLA'S NOTES ON COUNTRY SEATS.—Dear Sir: Your most admirable magazine is not one to which exception can often be justifiably taken—certainly not in any case where your own hand guides the pen, and but seldom in that of your correspondents. It is not for me to eulogize the good work it does, or attempt to magnify the place it fills in "the country" world. There is, however, in the April number of your book, a letter from one "Horticola," describing country seats, that, in one respect, is so void of a proper appreciation of landscape scenery and the beautiful in country seats, that I know you will not object to see a protest entered upon his criticism. I allude to his remarks upon the country seat of George W. Lyman, Esq. (Your writer calls the proprietor G. C. Lyman, thus showing his ignorance, as it would seem, of the vicinity.) He designates it as crotchety and ludicrous. You, who have an eye for the beautiful, and the sense and perception to appreciate it, would have come to a far different conclusion had you been afforded the most distant glimpse of it. He compares it with Rose Hill, and a Mr. Leland's place, both suburban villas, of the size of two or three acres, which pretend to nothing else. Mr. Lyman's place is an estate of nearly 800 acres, full of natural beauty, and planned and executed, and actually grown by the first Mr. Lyman, nearly fifty years since, when there was no example, no "Downing's Country Houses" to guide him. He was a man of taste, natural and inbred, and he produced a work that has but few equals in New-England, one that you yourself would call a truly English country seat—for in looking at it you would be immediately reminded of the English gentleman's country home, that you have so often described. For taste in the grouping of trees, the position and effect of the house—the management of the approaches, the just weighing of art with the nature that surrounded him, Mr. Lyman was eminently successful.

I will not consume your valuable time longer, but close with the request that when you next visit this part of the country, you should look for yourself. Your neighbor, Mr. SARGENT, could doubtless have given you a more correct impression of the place than HORTICOLA. Yours, very faithfully, "A SUBSCRIBER."

We suspect Horticola not to be an unprejudiced critic, and fear, from what we have since learned, he has done injustice to several places in his last communication. Ed.

WANTS OF OUR READERS.—Will you allow a subscriber to make a suggestion respecting the information wanted by a large class of the readers of the Horticulturist, who like himself, are at a loss for practical instruction on the culture of flowering plants. But few books on the subject are within our reach, and these not adapted to teach floral culture in this climate. A small number of the readers of the Horticulturist possess greenhouses or the means of cultivating plants, requiring artificial heat, yet the common frame is within the reach of most of them. Frame plants when perfectly cultivated are a source of much pleasure. Practical instruction

on the culture of plants in frames, and of the plants most proper for this culture, would be interesting to your readers; but little on the subject is in your journal—not a word on the culture of the *Primula* family, and many other fine frame plants. This information may be extracted from English and French works on floral culture. It will require adaptation to this climate by a skillful florist, and will then be more acceptable to your readers, than many essays which have occupied the pages of the *Horticulturist*; reference is not made to these essays unconnected with horticulture, from a desire to censure, for the writer believes the "*Horticulturist*" has done much to promote and improve horticultural taste in general, and is the best work of its class in the country; it would be still more valuable, indeed indispensable to many, were it to furnish practical instruction on the cultivation of plants in classes, commencing with plants adapted to small gardens, and continuing the subject until it contained practical instruction on the culture and propagation of all the most desirable ornamental plants grown in the open ground, the frame, the conservatory, or the hot house. Very respectfully, C. Louisville, Ky., April 10, 1852.

We hope some of the many experienced cultivators among our subscribers, will assist us in meeting the excellent suggestions of our correspondent, by sending us short practical articles on the culture of different classes of plants and trees. ED.

MANAGEMENT OF VINERIES.—In reading, I think the February number of the *Horticulturist*, I found a statement from W. CHORLTON, in regard to the management of his cold grapery, in which he states that he gathered grapes well ripened on the first of August. Now I should like to be informed if he had not two *stoves* in his cold grapery, for some portion of the early part of the season, and if he has no objection to inform your readers, who I dare say are interested in the matter, how long he kept up the artificial heat and to what degree, on an average. Yours truly, H. B. New-York, March 22.

IS TAN-BARK A FERTILIZER?—The question has been mooted, "is tan-bark a fertilizer," in one of the late numbers of the *Horticulturist*. Mr. DOWNING speaks highly of it as a *mulcher*

for strawberries; and on the authority of Prof. MAPES, recommends it as a fertilizer, for that plant. Its good qualities as a mulcher, I can well understand, it being a nonconductor; and therefore a protection against the cold of winter, and the too sudden heat of early spring, guarding against great alternations of weather; allowing the cold soil after winter to become gradually warmed, preventing that rapid change from cold to heated ground, but blending the one season gently into the other.

As a fertilizer for strawberries, Prof. MAPES has found it excellent. For this purpose I have not tried it myself, but with many other plants and trees I have. I must, however, in the outset, say what I have used, was not *fresh* from the tan-yard, but had been used for the forcing of pines, grapes, and other purposes, and after all fermentation had ceased. I employed it in various ways—among others the following: I have mixed it with soil (a sandy loam) in which were planted out American *Arborvitæ*, Chinese do., English laurels, *laurestinus*, Portugal laurels, Evergreen oaks, *Arbutus*, *Daphnes*, and many other shrubs;—and in it not one genera grew well. Indeed, on the contrary, it gave undeniable evidence of being most inimical to the growth of them all; the first year after planting they put on a debilitated sickly appearance; the second year they became worse, after which the plants were moved into other ground to save them; a considerable part was so sickly they had to be thrown away. In order to test this more accurately I had a bed about 100 feet long, five feet wide, taken out to about the depth of 18 inches, and filled with old tan-bark; in this was planted a collection of shrubs including nearly all that I have already named with many others; the greater part were turned out of pots and were healthy, thrifty plants; consequently they received no check on their removal. This was performed early in April—an excellent time. The first summer, if it could hardly be said these plants grew at all, they did very miserably, turning as yellow as a lump of Californian gold, and autumn found them half decayed and dying. Here, however, they were allowed to remain—grow they did not—another year—at the end of which more than three-fourths were completely dead, and of the few which remained, only portions of the plants were alive. They

were in such a lamentable plight that the whole had to be destroyed without a solitary exception, and the bed filled in with the original soil. From the shrubs used, the reader will readily know these trials have been made in England. Tan-bark at this time, had been strongly recommended as a fertilizer for the Chinese Arborvitæ, and in my experiments it proved as fatal to that shrub as the others. For Rhododendrons I have employed it in a variety of ways, such as mixed with peat, mixed with loam, and also planted them into it in a pure state; in all of which it proved injurious, and had to be removed. Upon many other shrubs and trees I have tried it by digging it into the ground and the effects were the same, as well as on kitchen garden vegetables. I have seen it tried as a top dressing upon grass land, and its effects were most injurious. It destroyed and weakened the best varieties of grasses, and, as a consequence, gave more room for the weeds; its effects were visible at some distance. Having had annually at command a large quantity of old tan-bark, and this for some years, I have experimented with it, in a variety of ways on a large collection of trees and shrubs, as I have been describing, in an extensive nursery, without any beneficial results. In the spring of every year, the prunings, weeds, rubbish and cleanings of the nursery were regularly charred, and it was at last determined to char the tan-bark too. After which it is found to be useful as a fertilizer for heavy land, or seeds, seedling trees, cuttings, or any thing requiring a light manure.

From the above facts it is evident tan-bark must be used with caution. Perhaps there may be a difference between what I have used—what had undergone fermentation in pits and hot-houses—and what other persons may use fresh, from the tan-yard, but surely if there is a danger with either, I should consider the greater with the latter; it being used in a rank state. Yours respectfully, JOHN SAUL. Washington, D. C., April 16, 1852.

[We quite agree with Mr. SAUL as to any practical value of tan-bark as a manure. To nearly all plants it is no doubt injurious—especially if fresh—though possibly it may be beneficial to strawberries if spread lightly over the beds.

But as a mulcher, to keep the soil cool and

moist in this sunny climate, tan-bark is a most invaluable substance for almost every tree or plant that needs such protection. As a winter protection against cold we have found it equally serviceable—especially if kept dry by a coating of straw or boards to shed the rain. While therefore, we doubt its value as a fertilizer, generally, and are confident if brought in contact with the roots of many plants, it is injurious, we look upon it as of exceeding value as a protection against the excesses of our climate in all cases where such is necessary. Ed.]

A WORD FOR THE CACTI.—I feel very much inclined to take up the cudgels against your correspondent "WORKING GARDENER," in behalf of that exceedingly beautiful and much abused order of plants, the Cacti.

I do not care for the jealousies of "practicals" or "amateurs," with regard to the silver medal; it is true that practical gardeners have not attended to the cultivation of these plants, because, with the exception of the winter flowering *Epiphyllum truncatum*, and its varieties, they cannot be used in bouquets, nor is the taste for them sufficiently general to allow of their being cultivated for sale; consequently they do not pay.

In this neighborhood, I know but one "practical" who cultivates them for the "love of them." All honor to him for it.

There are certainly five or six collections in this county, which might contend for the silver medal in question, and Mr. Working Gardener is mistaken in supposing that the course would be "walked over," as I think I know at least two collections from which better selections could be made of "twenty best grown species," than from that of the practical he alludes to.

As for having twenty species in flower at once, I don't see why that should present any difficulty; I could furnish a dozen in flower in an hour or two, without going to any large collection. I will have in flower in a week or two, *Cereus speciosissimus*, *C. Jenkinsonii*, *Scottii*, *Agaliformis*, *Grahamii*, and *Mamillaria uncinata*, yet my Cacti do not exceed fifteen specimens of all kinds.

Depend upon it, Mr. Editor, a horticultural society is as right in bestowing prizes on an order of plants, the extreme beauty of whose

flowers no one will question, as on any class of florist's flowers which may happen to be in fashion. I know that it is the fashion at present to "snub" Cacti, but the fashion may change, when we shall hear working gardeners talk as learnedly about *Cerei Epiphylla*, and *Phyllocacti*, as they now do about Fuchsias, Cinerarias, Pansies and Chrysanthema, for, as Mr. Buxer says in his last edition, "the time is not far distant when this family will be successfully cultivated in every parlor window, and the whole tribe will be sought for with more avidity than any other class of plants that have ever been brought into notice, not even excepting the *Rose*."

Wishing Mr. Working Gardener more taste, I remain, Mr. Editor, your obt. servant, A
PHILADELPHIA AMATEUR.

THE WINTER IN GEORGIA.—As you desire accounts of the effects of the last extreme cold winter, from all sections of the country, I will briefly report what injuries we have sustained.

In the coldest day of an ordinary winter, the mercury with us descends generally as low as 12 or 16° Fahrenheit, frequently to 8°, and occasionally to 6°, which we consider *extreme cold*.

This year, after a mild damp day, on the 18th of Jan. the mercury suddenly fell during the night, to 16 on the morning of the 19th, and growing still colder, the mercury stood at sunrise on the morning of the 20th, at two degrees *below zero*. During the rest of the week at sunrise, it generally ranged at 12 and 15°, and we had thus the very unusual pleasure of almost an entire week of excellent skating, in the middle of Georgia!

Of our ornamental plants, Newtona Japonica was killed to the ground. This usually needs no protection. The Cape Jasmine, usually requiring only a slight protection of evergreen boughs, is, in spite of its usual protection, in the same condition. The Roman Myrtle, usually hardy, is in the same state, and the Chromatella Rose, has, in some instances, also been killed. All of the above are, however, sending up fresh shoots from the root. Cedar of Goa, which, like the above named plants, has survived our winters for several years past, is now killed utterly. Dahlias, which generally winter well in the open ground, are nearly all

destroyed. Even those which were taken up and stored, did not generally escape, our rooms and green-houses not being prepared to sustain such excessive cold.

In the fruit garden the Pomegranate is not hurt. But fig trees of all kinds are killed to the ground, except some very large trees of the Celestial Fig, which are throwing out fresh shoots from the main branches. All the limbs less than about two inches in diameter, on these, are killed, and the main trunk seriously split by the violence of the frost.

In the kitchen garden, the English Pea, planted in December, which usually survives our severest cold, was killed entirely. Below us, where the mercury fell to 2° above zero, I learn they survived. So the cold that is fatal to the garden pea, is somewhere between 2° above and 2° below the zero of Fahrenheit.

I enclose you a few seeds of the "Quail Melon," which we think superior to the Rock, and the best yellow fleshed melon we have tried. If in your climate, it should prove as good, I think you will be pleased with it. It is nearly as good as the green fleshed melon; of a very singular shape; quite large, and exceedingly productive. Yours very truly, Wm. N. WHITE.
Athens, Geo., April 15, 1852.

THE WINTER IN NORTHERN NEW-YORK.—In compliance with your request, in the April number of the Horticulturist, I send an account of the effects of the past winter on our fruit buds. The winter although long and cold, was exceeded by that of 1835-36, both in amount of snow and cold, the thermometer being a number of times 18° and 20° below zero. Bearing quince and peach trees were killed, although there was no frost in the ground, and the snow four to five feet deep. The plum buds were killed. During the past winter the falls of snow were light, at no time exceeding nine or ten inches. The thermometer in our garden, protected on the east and north by buildings, stood at daylight, on 17th December, 6° below zero, 2° below on 26th, 10° below on 27th. On 20th January 6° below, 22d 11° below, 23d 3° below. In the outskirts of the city, and on College Hill, at 18° below on the 22d. In our city gardens the plum buds are partly killed; peach and fine cherries, all killed; Morello and common cherry, partly killed. At

my father's farm, a little N.E. from the College, the peach, cherry and plum buds are all killed. The varieties of plum are Egg, Green Gage, Washington, Jefferson, Columbia, Coe's Golden Drop, Huling's Superb, Frost Gage, Coe's Late Red, &c. Cherries, Elton, Black Tartarian, Bigarreau, Mayduke, Knight, Early Black, Downton, Downer's Late, Black Eagle, Bigarreau Coleur d' Chair, Belle d' Choisy, Coe's Transparent. Dubois' Early Apricot, also killed. The farm is about half a mile east of the Mohawk, and about a hundred feet above it, sloping to the west; soil stiff clay with plenty of slate stone, partly underdrained. Some years ago I became satisfied that our tender fruit buds were not only injured by the severe cold of winter, but also by the sudden thawing after hard frost. As a general rule after a very cold night, we have a bright sun in the morning till 10 or 11 o'clock, when it becomes cloudy. I have observed here and there in our city gardens, a peach tree, protected by some building from the morning sun till 10 or 11 o'clock, which will blossom and bear some fruit, when the buds of trees exposed to early sun were killed. It is so this year. Yesterday I examined the buds of an early Nectarine, in our garden, and a peach in the garden of a friend, (both protected,) and they were sound, while on exposed trees they are killed. A few years since, in the early part of September, I visited one of the Shaker families, about nine miles east of us, in Watervliet, and their peach orchard had an abundance of fine fruit, although the thermometer, the previous winter, was down to 8° or 10° below zero, and our buds were killed. The trees were on the *west* side of a hill, just high enough to shield them from the sun till 10 or 11 o'clock; soil sand. I have kept a record of the weather for more than 20 years, and find that when we have the thermometer a little below zero, say two or three degrees in the early part of December, it is more fatal than 10° below zero in February, if the cold has not been so great previously. This year our buds were killed in December.

In a nursery near our farm, soil similar, the only variety of pear injured is the Bartlett, very badly, though the previous winter did not injure them at all. Yours truly, CHARLES H. TOMLINSON. *Schenectady, April 5, 1852.*

CHERRY TREES DESTROYED BY INSECTS.—An inquiry made by Mr. JOHN WATERS, of New-Milford, respecting an insect which destroyed his young grafts, reminds me of something that I should have made public before this.

For several years back I have been perplexed and annoyed by the appearance of my young cherry trees in the early part of summer; for on the springing of the sap they would appear strong and healthy, and seem to promise an early and vigorous growth; but as the buds unfolded themselves, they would begin to shrivel and to lose force, and after struggling for a few days or weeks, would finally drop off entirely.

For a long time, I supposed it to be the effect of our very cold winters, and had almost abandoned the hope of rearing the finer varieties in these parts; but as there was occasionally a tree that did not show any such signs, although equally exposed to the weather, and would thrive exceedingly, I was led to believe it to be the work of some insect or animal, which had not yet been described as a tree destroying thing.

I was soon convinced that it did not commit its depredations in the day-time, for I watched closely for sometime, without discovering anything, and yet the trees continued their sickly appearance; but on watching by night, I readily discovered that the young leaves were eaten as fast as they shot out, by an enormous beetle-bug, that only gnawed by night. I also discovered that these same beetles rose from the ground immediately under the branches of the trees; and by further examination by day-light, I found that there were from one to fifty of these bugs under every tree, either in the mulching or in the mellow soil. Now, after having made this, (to me,) very important discovery, I proceeded at once and deliberately, to knock each one of these malicious beetles on their heads, until their jaws were broken, and they were thus incapacitated for doing any further injury to the cherry trees. My trees at once began to assume a fine foliage and to renew their health, and since then I have had no difficulty in giving them an early start.

My practice is now to visit each one of my *small* cherry trees, two or three times a week during the first weeks of their annual growth, and to *hoe* them carefully. In this way I keep a fine nest for the bugs directly around the trees, which they greatly prefer to any more distant, and then I can, as I hoe, pick them out and cripple them at my leisure. Now I am quite confident that Mr. Water's trouble is occasioned by this same great beetle, which is very common in this whole country.

It is a bug about three-fourths of an inch in length, of a dark red color, and with a small black head. It is commonly noticed when it gets into the house on a fine May or June morning—when, after having made a desperate pass at the nearest candle or lamp, it brings up against the opposing wall, and with scrambling vain efforts to regain its lost equilibrium, precipitates itself, sprawling, upon the floor. But

seriously, the effects of this beetle upon my trees, before I found out its practice of eating the young leaves, was very pernicious. At least one tree in ten was destroyed; and those they did not destroy, they rendered spare and gaunt in their forms. WM. R. MANLY. *Newport, Herkimer Co., N. Y., Feb., 1852.—Cult.*

THE FRUIT.—We regret to learn from Mr. Ernst that most of the fruit, cherries, peaches, apples and pears, which had escaped the extreme cold of the past winter, have been carried away by the recent and unexpected visitations of Jack Frost. The warm weather immediately previous to the recent cold had tempted most of the fruit trees and flowers into leaf, and the buds of fruit had swollen so that frost, having a fair chance, has captured the entire lot. We shall have to give up for another year, hope of fruit. The loss of two successive seasons will prove a loss severely to be felt by farmers and horticulturists, and must be estimated at several millions of dollars. We have accounts from a great many sections of the east and west, and all have suffered severely. In some places, entire orchards of fruits, which have just come into bearing, have been destroyed.—*Cin. Gazette.*

STATISTICS OF VINEYARDS.—In accordance with a resolution of the Horticultural Society of Cincinnati, passed at its last session, calling on the President and Council to report on the extent of the interest at this time engaged in the wine business in the neighborhood of Cincinnati, we submit the following report:

Of the number of acres now under cultivation in vines, we are not, as yet, prepared to give an exact account, as the entire statistics of the county have not been fully made out since 1845. In that year there were eighty-three vineyards, covering an area of three hundred and fifty acres. In that year alone one hundred acres were prepared and planted, and the number of acres brought under cultivation has been steadily and rapidly increasing every year since. The great number of new vineyards commenced since 1845, some of which embrace twenty-five to thirty acres, with the annual enlargement of those previously planted, will swell the aggregate amount to not less than twelve hundred acres. From the statistics already in our possession, we can safely say that this is within the actual amount.

The labor bestowed upon this culture in the preparation of the ground, planting and dressing, and making the wine, gives employment to at least six hundred efficient laborers, at an annual cost of \$120,000, producing when in a bearing state, in moderately favorable seasons, about 240,000 gallons of wine, estimated at about the same number of dollars. Beside the cultivators and wine dressers, employment is also given to wood coopers, equal to the making of 8,000 barrels, estimated at \$8,000.

A considerable portion of this crop now falls into the hands of the wine coopers, and is converted into sparkling wine or champagne, thereby more than doubling its market price. The value of sparkling wine prepared in this county in 1851, as near as we can arrive at an estimate, amounts to not less than \$75,000. The dealing in these wines also forms a considerable item in the transactions of the wine merchants.

As most of those engaged in the culture of the vine have families to support, as well as others engaged in the business, it may, without exaggeration, be calculated that the wine interest in Hamilton county, affords subsistence, directly, or indirectly, to at least 2,000 industrious and sober people—a drunken vine-dresser we have never met with. S. MOSHER, Pres. Hort. Soc. Cincinnati, March 15, 1852.

BLACK KNOT ON PLUM TREES.—There has been much speculation and research for the cause of the black knot on plum trees. Some persons have supposed it caused by an insect. Some years ago I opened the knot and examined it, but did not discover any appearance of an insect, nor the eggs of one. So far as I know, it has not been satisfactorily learned what causes the knot.

The gardens of my adjoining neighbors are full of plum trees. All the trees are filled with the black knot, so as to appear as if a flock of small birds had lighted on the branches. Some years ago, I advised the owners to cut off the knots so soon as they appeared, or they would lose the trees—they thought best to leave them to the course of nature. The second and third set of their trees are now in the condition I have described, while my trees are free from knots. I have always looked for knots when in the garden, and when one appeared, I cut it off at any season, whether it was loaded with fruit or not. The trees soon put out other shoots, which filled out the place of the limb cut off, and my trees are in full size, as if no limb had been cut off, and there is not a knot to be seen on them. From this treatment, I am of opinion, that if a knot is suffered to remain on a limb, the disease soon spreads, like a canker, and fills the whole tree, as it has the trees of my neighbors. It is a misconception, that when a tree is set, it does not require further treatment. D. TOMLINSON. *Cultivator.*

OSAGE ORANGE HEDGE.—My latitude is 41° 35' north. The past winter has been one of intense severity. The plant above has been represented as semi-hardy, and some anxiety as to its efficiency as a hedge plant in this latitude, manifested. My hedge is now in its fourth spring, (if spring it can be called,)—quite a proportion of the last season's growth reached four feet in height. Its length is some three hundred feet. Not a plant shows any indication of injury, from any cause whatever,

since setting, and a more luxuriant, efficient, and beautiful hedge, I have not yet seen. **J. A. BEE DELANO.** *Fairhaven, Mass. April 16, 1852.*

PENN. HORT. SOCIETY.—The stated meeting was held on 20th April, Dr. W. D. Brinkle, Vice Pres't., in the chair. The exhibition was very fine. The long tables through the center of the saloon contained many interesting plants, and a number shown for the first time. In Robert Buist's collection, were the *Campanula nobilis alba*, a handsome plant; *Hyssopus nepalensis* in full bloom; *Epacris hyacinthiflora*; auricle morning star, new and of recent introduction—two remarkably fine seedling *Verbenas*; *Pimelia spectabilis*, throwing up innumerable stems from the root, each bearing a compact umbel of delicate flowers, a plant worthy of admiration and other beautiful specimens. From C. Cope's houses, a variety of choice plants, a cut flower of the *Victoria regia*, a moss covered urn and basket containing select cut flowers—also a basket of strawberries, a dish of grapes and another of mushrooms. From Robert Cornelius's garden, were a fine collection of everblooming roses, another of pansies and well grown forced vegetables—comprising one dozen of cucumbers, half a dozen of cauliflowers, four varieties of lettuce, six kinds of radishes, early peas and beans in the pod, asparagus, etc. C. Sheets exhibited a table of roses; James Powell, choice pansies; Joseph Ripka's gardener, a large specimen of *Rhododendron Russellianum*, a hand bouquet and a dish of mushrooms. John Sherwood presented a seedling *Rhododendron*, hybridised with *Azalea Sinensis*, partially evergreen, bearing clusters of orange colored blossoms. From Charles Horton of the state of Maine, superior Baldwin apples.

The conclusion of R. E. Scott's dissertation on the merits of the natural system of Botany over the Linnæan.

On motion, ordered that a committee of five be appointed to inspect all the gardens, private and commercial, in the neighborhood of this city, and within the influence of this Society, and report thereon.

The Prospectus of a new Horticultural Journal called the "Philadelphia Florist," of which R. Robinson Scott is editor and proprietor, was submitted.

A letter from Prof. S. S. Haldeman, in acknowledgment for his appointment to the chair of Entomology, was read.

On motion, ordered that a vote of thanks be tendered to Capt. McMichael for a package of flower seeds from California. **THOS. P. JAMES,** Rec. Secretary.

BUFFALO HORT. SOCIETY.—**JAN. 20.**—The Society met at Lewis Eaton's—The President in the Chair.

Fruits exhibited.—By Lewis Eaton—Apples: Baldwin, Eaton.

By Mrs. Vandewater; two varieties for a name.

The committee appointed to publish the Transactions of the Society for the past year, reported progress.

After a discussion of the apples presented, and on various other subjects, the Society adjourned.

Feb. 17. Met at Benjamin Hodge's—Vice-President Taintor in the Chair.

Fruits Exhibited.—By Benj. Hodge—Apples: American Golden Russet, Beauty of Kent, Brabant Bellefleur, Carthouse, Esopus Spitzenburgh, English Russet, King, Lyman's Pumpkin Sweet, Lady, Minister, Michael Henry Pippin, Pownall Spitzerburgh, Roxbury Russet, Swaar, Westfield Seek-no-farther. Pears: Glout Morceau, Pound.

By W. R. Coppock—Apples: Yellow Newtown Pippin, Sweet Pearmain, Swaar, Northern Spy, Crow's Nest Russet.

By L. F. Allen—Apples: Ladies' Sweet, Spencer.

By W. Granger—Apples: Baldwin, Northern Spy, Swaar.

The following were tested and discussed—Apples: Ladies' Sweet, American Golden Russet, Northern Spy, Sweet Pearmain, Minister, King, Newton Pippin, Spencer, Carthouse, Westfield Seek-no-farther, Brabant Bellefleur. Pears: Glout Morceau.

The committee on the library reported a list of works which had been purchased for the use of the Society.

W. R. Coppock stated that Messrs. Mason and Lovering had tendered to the Society the gratuitous use of a room for the purpose of holding the semi-monthly meetings, whereupon, on his motion, their offer was accepted, and the thanks of the Society unanimously voted to them therefor.

March 3.—The Society met at Lewis F. Allen's—The President in the Chair.

Fruits exhibited.—By L. F. Allen—Pears: Easter Beurre, very fine, from Ellwanger and Barry, of Rochester.

By B. Hodge—Apples: Fallwater, Jonathan, Fameuse, Lovett's Sweet.

By W. Granger—Apples: Esopus Spitzenburgh, Swaar, Baldwin, Roxbury Russet.

By L. Eaton—Apples: Baldwin.

The following were tested and discussed—Pears: Easter Beurre. Apples: Fameuse, Jonathan, Baldwin, Swaar.

March 16.—The Society met at the residence of the President, A. Bryant, who presided.

Fruits exhibited.—By A. Bryant & Son—Apples: Baldwin, Esopus Spitzenburgh, Westfield Seek-no-farther, Lady, Fameuse, Talmay Sweet, Rhode Island Greening, Golden Russet, Pomme Gris, Winesap.

By B. Hodge—Northern Spy, Swaar, Brabant Bellefleur, Lyman's Pumpkin Sweet.

By L. Eaton—Baldwin.

The Osage Orange was stated to be but

slightly injured by the winter, and its fitness for a hedge plant was generally admitted.

The following pears were discussed: French Jargonelle, Louise Bonne de Jersey, Steven's Genesee, V. M. Leon le Clerc, Duchesse d'Angoulême, Winter Nells, and Orange.

On motion of W. R. Coppock, a vote was passed recommending to the public Messrs. Mason & Lovering's Agricultural Warehouse, which was ordered to be published.

The Society then adjourned. JNO. B. EATON, Recording Secretary.

NEW-HAVEN HORT. SOCIETY.—We sometimes find it matter of convenience to know the names of officers of sister societies, as we find them in the Horticulturist. Possibly it may be equally interesting to some to know the names of officers of our society, through the same medium. If convenient you will please use the following:

At the annual meeting of the New-Haven County Horticultural Society, held at the office of Chas. Robinson, Esq., the 17th inst. James Harrison, Eleazer E. Clarke, S. I. Baldwin, John J. Walter, N. A. Bacon, Carlton White, Charles Beers, T. H. Totten, and Jonathan Stoddard, were chosen Directors for the current year.

At a meeting of the Directors, held on the following Monday, at the same place, Charles Robinson, Esq., was re-elected President.

S. D. Pardee, Esq., 1st Vice President.

C. B. Sims, Esq., 2d do.

George Gabriel, Secretary.

E. H. Bishop, M. D., Cor. Secretary.

Wm. Johnson, Esq., Treasurer.

These together constitute the board for transacting the business of the Society. GEORGE GABRIEL, Sec'y. *New-Haven, March 28, 1852.*

DETROIT HORT. SOCIETY.—At the annual meeting of the Detroit Hort. Society just held, the following persons were elected officers for the present year:

President—A. C. HUBBARD.

Vice Presidents—Thos. Lockwood and F. Raymond.

Treasurer—Stephen Smith.

Rec. Secretary—Chas. Betts.

Cor. Secretary—Bela Hubbard.

The Society has now effected a substantial and we trust a permanent organization. An excellent room has been secured for the exhibitions of the Society, the present season; and every effort will be made to make them interesting and instructive.

The advantages of having an energetic Horticultural Society are too obvious to remain unnoticed. Practical men believe now, that fruit growing, taken all-in-all, is one of the most profitable and pleasurable departments of husbandry. Every body is planting trees; nurseries are springing up in every part of the State; yet they each sell double the number of trees that either did three or four years ago. Our trees first

planted are coming into bearing, and the fine character of the fruit gives great encouragement to extend operations. And a Horticultural Society now is the result of bare necessity.

Persons in all parts of the State are solicited to become members. Any person by sending one dollar to either of the officers, will be elected a member of the Society, and it is really to be hoped that those who are engaged in fruit growing, and feel an interest in the dissemination of correct knowledge in reference to culture, adaptation of varieties to our climate and soil, the proper naming of fruits, which are now propagated under false or erroneous names, which causes perplexity, trouble and loss, &c., will take hold and help the matter on.

The Society have decided to hold five exhibitions the present season; one in each of the months of May to September inclusive. Due notice will be given of the time of holding the exhibitions, and persons will be appointed to receive fruit, &c., sent from a distance where members cannot make it expedient to attend personally.—*Michigan Farmer.*

COLUMBUS, (O.) HORT. SOCIETY.—This society was organized for the present year by electing the following officers and committees:

President—JOHN MILLER.

1st Vice-President—Lucien Butties.

2d Vice-President—Benjamin Blake.

Treasurer—Adam Sites.

Cor. Sec.—Henry C. Noble.

Recording Sec.—Geo. B. Comstock.

Council—The President and Treasurer *ex officio*, and Messrs. A. E. Glenn, John Burr, and F. Stewart.

Garden Committee—Dr. I. C. Jones for five years; Benj. Blake four years; Lucien Butties three years; Robert Hume Jr., two years and John Miller one year.

Answers to Correspondents.

ROSE SHRUBS.—*Filius*, (Toronto.) *Viburnum Opulus-roseum*—the rose colored variety of the common Snow Ball, about which you inquire, we do not remember to have seen. If any of our nurserymen have cultivated it, we will be glad to hear from them. We do not understand your inquiry about cutting apple "stocks" into two or three pieces? Do you mean grafts? If so, every portion of a good young shoot, with three buds, will make a good graft.

BOOKS.—O. (Newbury, S. C.) Consult Barry's Fruit Garden, and our Fruits and Fruit Trees of America. The other books most desirable for you are, Mrs. London's Flower Gar-

dening for Ladies, Lindley's Horticulture, Loudon's Suburban Horticulturist, Paxton's Botanical Dictionary, and Loudon's Encyclopedia of Gardening.

GRAFTS.—*Ibid.* Nurserymen usually send grafts of rare fruits, at the price of a tree for a dozen grafts; more common sorts at much lower rates by the quantity. *John Jones.*—The grafts of the grape-vine should be kept in a cellar till the leaves of the stocks are bursting—then grafted. In this way they take very readily.

EVERGREEN SCREENS.—*O. V.*, (Syracuse, N. Y.) Nothing would be more suitable for a screen for the purpose you mention, than evergreens—especially a mingling of the following sorts: Norway Spruce, Hemlock, American Arbor Vitæ, with an occasional White Pine, Scotch Pine, and Balsam Fir. Do not plant them too thick—or if so planted, thin them out before the branches touch—otherwise you will lose much of the beauty of the trees.

GLASS PIPES.—*C. W. Wever.* Glass pipes for conveying water, can, we imagine, be had of ALLEN & Co., Agricultural Warehouse, N. Y. The cost we do not know.

LAWNS.—*A Lady*, (New-London, Conn.) Plant your lawn with a mixture of the following grass seeds, at the rate of three bushels to the acre, viz: one and a quarter bushels red-top, one and a quarter bushels blue grass, four quarts of white clover. This will make a thick lawn in 10 or 12 weeks.

CUT-WORM.—*James.* Sow the ground with coarse salt—three bushels to the acre, before you turn it over with the spade. This will destroy the grubs and benefit the crops.

CURRENTS.—*M. R.* (Utica) No shrub shows the good effects of high manuring so completely as the currant. If you wish to get very large fruit, *train* the bushes on the north

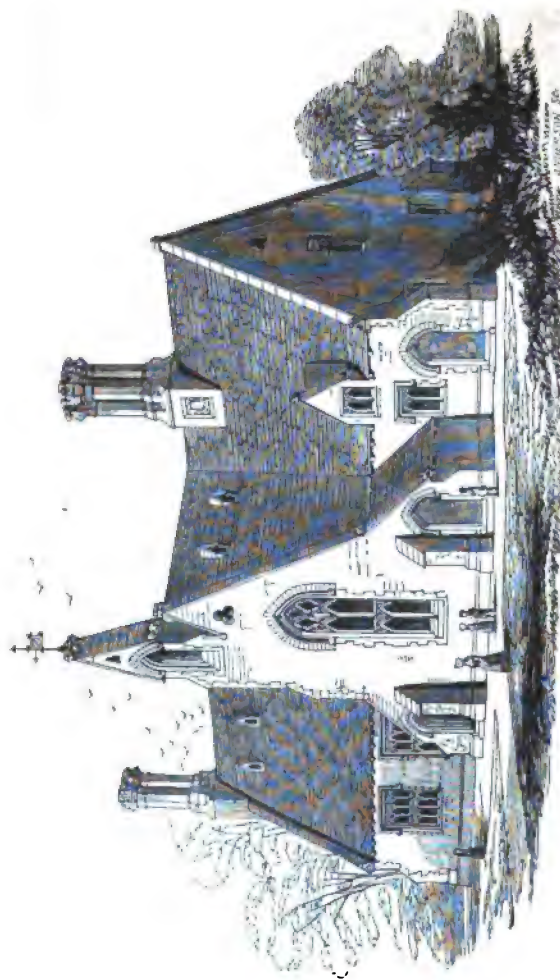
side of a trellis, and feed the roots well with half rotted stable manure.

MELONS.—*A. B.*, (Trenton.) The earliest by far is the Christiansa—a Boston variety—full ten days before the green fleshed sorts. The green fleshed Citron and the Beechwood, are two of the highest flavored sorts. The Mountain Sweet is the best water melon.

PEACH WORM.—*A Constant Reader*, (Pittsburgh.) Take away the ground three inches deep at the base of the trunk, around all your peach trees; if you see gum, the grub is then at work—follow and take it out with the knife. Pouring a pail of boiling water at the base answers the same purpose. It is a good plan to heap a small bill of leached ashes around the trunk, to keep the insects away.

STUNTED TREES.—*S. Johnson.* Most probably your orchard was planted too deep. Loosen the soil well with the spade, and if the ground is heavy, dig in a mixture of stable manure and hard coal ashes. Head back the ends of all the shoots to make the trees throw out new ones, and wash over the trunks with thick soap suds—or rather soft-soap and water.

SUMMER BULBS.—*A Working Lady Gardener*, (Staten Island, N. Y.) The best bulbs for blooming in the borders in summer, are the following: Mexican Tiger flowers, (two colors,) Tuberoses, *Gladiolus floribundus*, *roseus*, *gandavensis*, *formosissimus*, and several other Ghent varieties; *Amaryllis*, *Johnsonia* and *formosissimus*, *Crocus autumnalis*, *Oxalis Bowei*, *Lilium Japonicum* and *speciosum*. The latter should be planted in a shady sheltered border. The others only require a rich sandy loam—the manure either poudrette or very rotten stable manure—the former the best—and a sunny open border. Plant all of these as soon as possible, before the middle of May.



English National School House.

THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE.

American versus British Horticulture.

WHEN a man goes into a country without understanding its language—merely as a traveller—he is likely to comprehend little of the real character of that country ; when he settles in it, and persists in not understanding its language, manners, or customs—and stubbornly adheres to his own, there is little probability of his ever being a contented or successful citizen. In such a country as this, its very spirit of liberty and progress, its freedom from old prejudices, and the boundless life and energy that make the pulses of its true citizens—either native or adopted—beat with health and exultation, only serve to vex and chafe that alien in a strange land, who vainly tries to live in the new world, with all his old-world prejudices and customs.

We are led into this train of reflection by being constantly reminded, as we are in our various journeyings through the country, of the heavy impediment existing—the lion lying in the path of our progress in horticulture, all over the country, in the circumstance that our practical gardening is almost entirely in the hands of foreign gardeners. The statistics of the gardening class, if carefully collected, would, we imagine, show that not three per cent of all the working gardeners in the United States, are either native or naturalised citizens. They are, for the most part, natives of Ireland, with a few Scotchmen, and a still smaller proportion of English and Germans.

We suppose we have had as much to do, for the last sixteen or eighteen years, with the employment of gardeners, as almost any person in America, and we never remember an instance of an American offering himself as a professional gardener. Our own rural workmen confine themselves wholly to the farm, knowing nothing, or next to nothing, of the more refined and careful operations of the garden. We may, therefore, thank foreigners for nearly all the gardening skill that we have in the country, and we are by no means inclined to underrate the value of their labors. Among them there are, as we well know, many most excellent men, who deserve the highest commendations for skill, taste, and adaptation—though, on the other hand, there are a

great many who have been gardeners, (if we may trust their word for it,) to the Duke of —, and the Marquis of —, but who would make us pity his grace or his lordship, if we could believe he ever depended on Paddy for any other exotics than potatoes and cabbages.

But taking it for granted that our gardeners are wholly foreigners, and mostly British, they all have the disadvantage of coming to us, even the best educated of them, with their practice wholly *founded upon a climate the very opposite to ours*. Finding how little the "natives" know of their favorite art, and being, therefore, by no means disposed to take advice of them, or unlearn any of their old-world knowledge here, are they not, as a class, placed very much in the condition of the aliens in a foreign country, we have just alluded to, who refuse, for the most part, either to learn its language, or adapt themselves to the institutions of that country? We think so; for in fact, no two languages can be more different than the gardening tongues of England and America. The ugly words of English gardening, are *damp, wet, want of sunshine, canker*. Our bugbears are *drouth, hot sunshine, great stimulus to growth, and blights and diseases resulting from sudden checks*. An English gardener, therefore, is very naturally taught, as soon as he can lisp, to avoid cool and damp aspects, to nestle like a lizard, on the sunny side of south walls, to be perpetually guarding the roots of plants against wet, and continually opening the heads of his trees and shrubs, by thinning out the branches, to let the light in. He raises even his flower beds, to shed off the too abundant rain; trains his fruit trees upon trellises, to expose every leaf to the sunshine, and is continually endeavoring to extract "sunshine from cucumbers," in a climate where nothing grows golden and ripe without coaxing nature's smiles under glass houses!

For theorists, who know little of human nature, it is easy to answer—"well, when British gardeners come to a climate totally different from their own—where sunshine is so plenty that they can raise melons and peaches as easily as they once did cauliflowers and gooseberries—why, they will open their eyes to such glaring facts, and alter their practice accordingly." Very good reasoning, indeed. But anybody who knows the effect of habit and education on character, knows that it is as difficult for an Irishman to make due allowance for American sunshine and heat, as for a German to forget sour-kraut, or a Yankee to feel an instinctive reverence for royalty. There is a whole lifetime of education, national habit, daily practice, to overcome, and reason seldom has complete sway over the minds of men rather in the habit of practicing a system, than referring to principles, in their every day labors.

Rapid as the progress of horticulture is at the present time in the United States, there can be no doubt that it is immensely retarded by this disadvantage, that all our gardeners have been educated in the school of British horticulture. It is their misfortune, since they have the constant obstacle to contend with, of not understanding the necessities of our climate, and therefore endeavoring to carry out a practice admirably well suited where they learned it—but most ill suited to the country where they are to practice it. It is our misfortune, because we suffer doubly by their mistakes—first, in the needless money they spend in their failures—and second, in the discouragement they

throw upon the growing taste for gardening among us. A gentleman who is himself ignorant of gardening, establishes himself at a country seat. He engages the best gardener he can find. The latter fails in one half that he attempts, and the proprietor, knowing nothing of the reason of the failures, attributes to the difficulties of the thing itself, what should be attributed to the want of knowledge, or experience of the soil and climate, in the gardener.

A case of this kind, which has recently come under our notice, is too striking an illustration not to be worth mentioning here. In one of our large cities south of New-York, where the soil and climate are particularly fine for fruit-growing—where the most delicious peaches, pears, and apricots grow almost as easily as the apple at the north, it was confidently stated to us by several amateurs, that the foreign grape could not be cultivated in vineries there—"several had tried it and failed." We were, of course, as incredulous as if we had been told that the peach would not ripen in Persia, or the fig in Spain. But our incredulity was answered by a promise to show us the next day, that the thing had been well tried.

We were accordingly shown: and the exhibition, as we suspected, amounted to this. The vineries were in all cases placed and treated, in that bright, powerful sunshine, just as they would have been placed and treated in Britain—that is, facing due south, and generally under the shelter of a warm bank. Besides this, not half provision enough was made, either for ventilation or water. The result was perfectly natural. The vines were burned up by excess of light and heat, and starved for want of air and water. We pointed out how the same money, (no small amount, for one of the ranges was 200 feet long,) applied in building a span-roofed house, on a perfectly open exposure, and running on a *north and south*, instead of an east and west line, and treated by a person who would open his eyes to the fact, that he was no longer gardening in the old, but the new world—would have given *tons* of grapes, where only pounds had been obtained.

The same thing is seen on a smaller scale, in almost every fruit garden that is laid out. Tender fruit trees are planted on the south side of fences or walls, for sun, when they ought always to be put on the north, for shade; and foliage is constantly thinned out, to let the sun in to the fruit, when it ought to be encouraged to grow thicker, to protect it from the solar rays.*

But, in fact, the whole routine of practice in American and British horticulture, is, and must be essentially different. We give to Boston, Salem, and the eastern cities, the credit of bearing off the palm of horticultural skill; and we must not conceal the fact, that the superiority of the fruits and flowers there, in a climate more unfavorable than that of the middle states, has been owing, not to the superiority of the foreign gardeners which they employ—but to the greater knowledge and interest in horticulture taken there by the proprietors of gardens, themselves. There is really a native school of horticulture about Boston, and even foreign gardeners there, are obliged to yield to its influence.

* If we were asked to say what practice, founded on principle, had been most beneficially introduced into our horticulture—we should answer *mulching*—mulching suggested by the need of moisture in our dry climate, and the difficulty of preserving it about the roots of plants.

We have spoken out our thoughts on this subject plainly, in the hope of benefitting both gardeners and employers among us. Every right-minded, and intelligent foreign gardener, will agree with us in deploring the ignorance of many of his brethren, and we hope will, by his influence and example, help to banish it. The evil we complain of has grown to be a very serious one, and it can only be cured by continually urging upon gardeners that British horticulture will not suit America, without great modification, and by continually insisting upon employers learning for themselves, the principles of gardening as it *must* be practiced, to obtain any good results. This sowing good seed, and gathering tares, is an insult to Providence, in a country that, in its soil and climate, invites a whole population to a feast of Flora and Pomona.

A NOTE ON VINE CULTURE.

BY WILLIAM CHORLTON, STATEN-ISLAND, N. Y.

DEAR SIR—I suspect your correspondent, H. B., has got the prying faculties very largely developed, as he inquires so *very particularly* about the “*two stoves*” which were used in the cold vinery at this place, in the earlier part of last season; and as persons of this description are apt to be uneasy until their wishes are gratified, I hasten to relieve him of his unpleasant anxiety. As I have no secrets in my practical working, and do not wish to conceal any minutiae in my operations, that will be of service in disseminating useful information, I feel obliged to him for reminding me of an omission, (if it can be construed into such a form,) but the matter was of so trifling a character, that I did not think it of sufficient importance in the detailed account sent you. When writing that account, I had embodied a few general remarks on cold graperies, in which were mentioned explicitly, these two stoves; but as the article seemed swelled out into an inconvenient length, these remarks were extracted from it, with the intention of sending them at a future opportunity, thinking that your readers, who he says “are interested in the matter,” might be more benefitted by it in that form—and as I do not like to occupy at the present too much of your valuable space—I will extract the passage, (with your permission,) from manuscript in which the *two stoves* are mentioned, and which runs as follows:

“I would remark, that however long we may try to retard vegetation, the buds of the earlier kinds will begin to burst before the occasional frosty nights and north-east storms of the latter part of April, are past, and for safety, a temporary heating apparatus of some kind will be of service at this time, merely to be ready in case of need. To answer this purpose, there were put up in the house at this place, two common stoves, which enabled me to raise the temperature five or six degrees during several frosty nights, and also once in the day, when there was snow and frosty wind all day. It would also be of service in cloudy, damp weather, during November and December, to dry the air of the house, and prevent mouldiness in the grapes. At no other is it required, as we have natural heat and light sufficient, if made good use of, to ripen the grape perfectly.”

These *two stoves* stood in the house about three weeks, but were not lighted more than six times during that time, and only when the thermometer outside sunk to the freezing point; they were only used once in the day time, when there was a severe snow storm, with frosty wind, and it was only to keep the frost from killing the bursting buds, that the idea

of having them was suggested. There was not consumed more than 150 pounds of coal, and as I employ my time as usefully as possible, and have no opportunity to trifle, I send H. B. the dimensions of the house in which 150 pounds of coal was consumed: it is 74 feet long, 20 feet wide, and 14 feet high, with glass on all sides, and ask him to be kind enough to work out the mathematical problem of how far it will give "artificial heat, and to what degree on an average." That he may not err in his calculations, he must allow for the exposed situation of the house, which, if I am not greatly mistaken, he is aware of.

As to the point at issue, viz—cutting ripe grapes on the second of August, (not, as he erroneously states, the first,) without artificial heat, it is the most simple part of the business; and it strikes me forcibly that he writes without much experience, or he would well know that the kinds mentioned, (Malvasia, and Joslin's St. Albans,) may be ripened so early without any fire heat whatever. Those same grapes were ready to cut a week earlier, but as my employer was from home at the time, they were reserved till his return; so that allowing for the six nights and one day that the stoves were lighted, the argument will stand about "zero" in his favor. The season in which the vines were planted, 1850, no stoves were used, and I cut several bunches from tubs planted the same spring, the latter part of July. There has not been either, any fire heat of any kind, this season, and the vines are growing very vigorous, and many have shown from fifty to over sixty bunches, generally speaking, stronger than last year. Hoping I have explained all to the satisfaction of your correspondent, I am yours respectfully, WM. CHORLTON,
Gardener to J. C. Green, Esq., New-Brighton, Staten-Island.

May 1, 1852.

A LIQUID FERTILIZER FOR CHOICE PLANTS.

BY AN AMATEUR, NEW-YORK.

DEAR SIR—I am confident that there are many of your lady readers, and perhaps many of the other sex, who are puzzled among the many *new manures*, and having failed with some, and injured their plants with others, they end by raising only sickly and meagre plants, when they might have them presenting a luxuriant and satisfactory appearance—with leaves of the darkest green, and flowers or fruit of double the usual size.

Having made a trial for three years past, with a *perfectly safe and satisfactory liquid fertilizer*, which appears to suit all kinds of vegetation, which is clean and easily applied, and procured without difficulty, in any town, I confidently recommend it to your readers, especially those who wish to give especial pains to, and get uncommon results from, certain favorite plants—either in pots, or in the open garden—plants whose roots are within such a moderate compass, that they can be reached two or three times a week, if not oftener by the watering-pot.

This liquid fertilizer is made by *dissolving half an ounce of sulphate of ammonia in a gallon of water*.

Nothing so good can be cheaper, and the substance may be obtained at almost any apothecary's.

New for the mode of using it. I may say, at the outset, that weak as this solution appears to be, and is, if plants are watered with it daily, they will die—just as certainly as a man will who drinks nothing but pure brandy.

The right way to apply it is to water the plant with this solution *every sixth time*; the other five times with plain water.

The proportion is so simple, and the mode of using it so easy to understand, that the most ignorant person cannot possibly blunder about it—if *he can count six*. If we prepare the solution occasionally, and water our plants in pots *every Saturday*, with this ammonia water, and all the rest of the time with plain water, we shall have a safe rule.

The result will, I am sure, both delight and surprise every person who will make a trial of it. It has become such an indispensable thing with me, that I regularly mix a barrel of it every Friday, and use it on Saturday, upon any plants that I particularly wish to invigorate and stimulate. I do not know that I have seen a single instance of its disagreeing with any plant—ammonia being the universal food of vegetation. Of course, the more rapid growing plants—those with foliage that perspire a great deal, are most strikingly benefitted by it. Of course, also, *plants* that are *at rest*, or not in a growing state, should not be fed with it; but any plant that is about starting, or *is actually in a growing state*, will not fail to be wonderfully improved by it. Many plants that have fallen into a sickly state by reason of poor, or worn out soil, will, usually, in the course of a month, take quite another aspect, and begin to develop rich, dark green foliage. I will enumerate some of the things that I have had great success with.

Strawberries.—Beds of indifferent appearance at the opening of the spring, last season, after being watered four times with this solution, grew very luxuriantly, and bore a crop of remarkably fine fruit. This year I have repeated the experiment on half of every bed; both foliage and blossoms are as large again on the watered, as on the unwatered bed; and by way of comparison, I have watered some with plain water also—and find, though rather benefitted, (for the strawberry loves water,) they have none of the extra depth of verdure and luxuriance of those watered with the ammonia.

Early Peas.—At least a week earlier than those not watered, and much stronger in leaf and pod.

Fuchsias.—A surprising effect is produced on this plant, which, with the aid of ammonia water, will grow in very small pots, with a depth of verdure, a luxuriance, and a profusion and brilliancy of bloom, that I have never seen equalled. Old and stunted plants are directly invigorated by it.

Dwarf Pears.—Some sickly trees, that I have given the best attention for three years previously, without being able to get either good fruit, or healthy foliage, after being watered four times with the solution—of course with the usual intermediate supply of common water—became perfectly healthy and luxuriant, and have ever since, (two years,) remained so.

Dahlias.—Which I have never succeeded well with before, have done beautifully with me since, flowering most abundantly and brilliantly, when watered in this way. In all out-of-door plants, if mulching is used, only half the quantity of plain water is needed. For plants in pots, I consider it invaluable; and gardeners who wish to raise specimen plants for exhibition, will find this mode of watering them *every sixth time* with the solution, to produce a perfection of growth not to be surpassed in any other way.

Yours truly,

AN AMATEUR.

New-York, May 10, 1852.

We endorse our correspondent's testimony to the value of the solution of sulphate of ammonia, applied in the manner he directs, having witnessed its satisfactory effects. ED.

EFFECTS OF THE SEVERE WINTER ON RARE EVERGREENS.

BY HENRY WINTHROP SARGENT, FISHKILL LANDING, N. Y.

MY DEAR SIR—In compliance with your request to know the effect of the past severe winter upon the new evergreens, I give you the following result of my examination, first premising that nearly everything was entirely uncovered on the 26th December, when the thermometer was down to 13° below zero, and that from and after that time, until the 30th March, they were more or less protected by hemlock and cedar boughs, tied loosely upon three sides—that to the north being generally exposed.

Abies Smithiana—(Himalayan Spruce)—Leaves either destroyed, or quite brown, except on the lower branches, which, being more or less protected by snow, are quite green; buds perfect; will no doubt prove quite hardy. I should say young plants were but little if any more tender, than young Deodars.

Abies Douglasii—(the Deodar Cedar)—Somewhat burnt—not as much as *A. Smithiana*.

A. Menziesii—Apparently uninjured and quite hardy. Color faded a little, like our native *Arborvitæ*, which the spring will soon restore.

Pinus Pinaster—Sadly cut up; color of brick dust. A plant ten feet high, *unprotected*, except that the 11 o'clock sun is broken off; perfectly green and uninjured.

Pinus Cembra—(Stone Pine)—Uninjured.

Pinus Excelsa—Uninjured—quite as hardy, I should say, as our White Pine.

Pinus Pumilis—Uninjured; hardy.

Pinus Ponderosa—*Greener*, and even harder than the *P. Excelsa*, and I think much finer; in fact I esteem this rapid growing pine, from the banks of the Columbia river, as in beauty, next to the *Cryptomeria*—with a deep green, and fine long wand-like foliage, of six or seven inches.

Pinus Sabianiana—Badly cut up. I should think if grown for several years on the north side of an evergreen wood, that it would stand, and become a magnificent tree. It has a foliage as long and as delicate as *P. Ponderosa*, but lighter green, more like the color of the Deodar.

Pinus Gerardiana—Hardy.

Pinus Lambertiana—Hardy. I can see but little difference between this and our White Pine, (*P. Strobus*.)

Pinus Muretta, or *Maritima*—Identical, it seems to me, with the *Pinus Pinaster*, and quite as much cut up.

Pinus Insignis—Hopeless; too tender for this latitude.

Pinus Filifolia—Hopeless; (but beautiful.)

Pinus Sylvestris—Of course, quite hardy.

Pinus Austriaca—Quite hardy, and very valuable.

Picea Cephalonica—(Cephalonian Fir)—Uninjured, and very handsome.

P. Pinsasso—(M't. Atlas Fir)—Uninjured, and very handsome.

P. Webbiana—(Webb's Silver Fir)—Quite hardy.

P. Pindrow—Hardy.

P. Nobilis—(Noble Silver Fir)—Hardy.

P. Pectinata—(European Silver Fir)—Hardy and beautiful. And now for the queen of evergreens, the

Cryptomeria Japonica—I am happy to say, that notwithstanding the thermometer being

down once to 13° and twice I think to 12°, she has thrown off her cedar overcoat, and come out as bright, and as vivid, as the Arborvitæ in May, and I have no doubt will be coaxed into hardiness, unless, as I think you once suggested, my most successful specimen may have been worked upon some peculiarly hardy stock, or influenced by some fortunate situation, and consequently is not a fair instance of its hardiness. With other trees I have not been equally successful—but this particular one, within ten feet of a Deodar, is entirely uninjured, while the Deodar, with some slight covering, has lost all its leaves. [Your *Cryptomeria* is no doubt on its own root—most of the tender ones are grafted. Ed.]

Araucaria Imbricata—I doubt if anything can be made of this, as a general rule—mine is four and a half feet high, and has survived three winters—but it has just now very much the appearance of having been made of Russia leather. Planted in a well drained and gravelly soil, well mixed with river sand, and on the north side of a wood, it may succeed. It seems peculiarly impatient of moisture.

Cedrus Libani—Generally hardy; this year a good deal cut up.

Cedrus Deodara—Small plants have lost their leaves; a plant eleven feet high, on the west side of my house, perfectly green; same size on the east, somewhat browned, showing conclusively that the sun, and not the cold, is our enemy.

Cedrus Argentea—About as hardy as *C. Libani*; may be more so when longer established here.

Juniperus Alpina—Hardy.

Hibernica—Hardy.

Communis Pendula—Beautiful and hardy.

Recurva—I think destroyed.

Encordi—Cut badly.

Tamariscifolia—Hardy

Excelsa—Hardy.

Bedfordiana—Pretty and hardy.

Taxodium Sempervirens—Destroyed—though I saw a tree bearing this name and appearance in Denmark, quite hardy, where peach trees would not live.

Taxus—(*Common English Yew*)—Hardy—though cut up this winter.

Horizontalis—Injured; but I think will stand.

Thuja Filiformis—(*weeping*)—Beautifully graceful, and quite hardy.

Tartarica—Hardy.

Plicata—Hardy.

New Funeral Cypress—I think will prove quite hardy, though the plants are very small.

Torreya Taxifolia—(*the Florida Yew*)—Undoubtedly hardy, though a little touched.

The English Evergreen Savin, has stood well. Golden and Silver leaved more tender. Gold and Silver Yews I think hardy.

Of the *Rhododendrons*—the *Catawbiense* and its varieties, especially the Belgic hybrids, have wintered without any protection, perfectly well. I understand from Mr. PARSONS, of Flushing, that the *Cunninghamia Sinensis*, an evergreen resembling the *Araucaria*, but more graceful, and denser in foliage, stands our climate with entire success.

In recapitulation—I consider as fairly hardy, (by which I mean by the time they are three to five years old,) the following trees.

Abies—Smithiana,
Douglasii,
Menziesii.
Picea—Cephalonica,
Pinsasso,
Webbiana,
Pindrow,
Nobilis.
Pinus—Pinaaster,
Cembra,
Excelsa,
Pumilis,
Ponderosa,
Lambertiana,
Gerardiana,
Austriacus,
Sylvestris,

Pinus—Maritima,
Pendula.
Juniperus—Tamariscifolia,
Alpina,
Hibernica,
Excelsa.
Thuja—Filiformis,
Bedfordiana,
Plicata,
Tartarica.
Taxus—Communis,
Horizontalis.
Cedrus—Lebani,
Deodara,
Argentea.
Cryptomeria—Torreya.

Probably, the New Funeral Cypress.

I should also add, that my Cedars of Lebanon and Deodars have been planted five years, and have stood *green, without protection*, until this remarkable winter. My *Auricularias* are four years planted and hardy. Everything else is still small, having been out but two years; if they had been planted several years longer, no doubt they would have battled this winter more successfully. To show you the extent of the cold, an entire orchard of Dwarf Pears, 102 in number, on quince, planted last fall, was all destroyed. Even many of the eyes of the grapevines in my vinery, are injured. Yours very truly,

HENRY WINTEROP SARGENT.

Walden, N.H., April 19, 1882.

REMARKS.—We are much obliged by the foregoing notes, not only because Mr. SARGENT's grounds contain one of the richest collections of evergreens in the country, but also because the results may be assumed to be those of the latitude of New-York, and the middle states generally.

The past winter has been the most severe upon vegetation, of any known in 40 years, except that of 1835-6. And though it should not be taken as having anything to do with the normal temperature of any portion of the Union—since we, in the middle states, have had the frosts of Canada, and our states bordering on the Gulf of Mexico, have felt the ice and snow usual to the middle states—it is very interesting, as a test of downright hardiness. Any tree or plant that has stood the past winter, may be considered as past all doubt, hardy forever afterward.

On the other hand, it does not follow that many fine trees that, to use our correspondent's expressive phrase, were only "badly cut up," should be abandoned as tender. Evergreens are remarkably susceptible to severe cold, when they have been lately *transplanted*, say only a year or two before it takes place. As a proof of this, we may mention, that of several hundred young hemlocks, two or three feet high, planted in this place last season, and which had apparently taken root firmly, full one quarter are now either partly or wholly dead—solely owing to the effect of the severe cold on one of the hardest of all native trees, *before the roots were established*. The same thing applies more strictly to rare evergreens turned out of *pots*, (as most of the rare imported evergreens are.) If, in planting these in the open border, the planter neglects to unwind the roots from the ball, and stretch them out, so that they shall take hold of the surrounding soil fully, the

young tree will often die in a severe winter, just as if the pot itself, with the roots in it, had been exposed—when if the roots were disturbed, and stretched out, it would have stood very well. Hence, many persons have lost specimens of that most beautiful evergreen, the Deodar, the past winter, and consider it hopelessly tender—while in fact, the Deodar well rooted, in dry soil, has stood perfectly well in several parts of the country, where the thermometer has fallen as low 12° below zero. To prove this still more conclusively, we need only refer to the Cedar of Lebanon. Small trees of this, turned out of pots one or two years ago, are nearly or quite destroyed. A specimen in our grounds, five feet high, and five or six years planted, is only slightly browned—not at all injured. A tree 60 feet high, near New-York, (where the thermometer has fallen to 10° below zero,) is not in the least injured.

We mention these facts to show that where a tree has not been killed—only injured badly—by the late severe winter, it should by no means be abandoned in despair by arboriculturists.

At Washington, the Deodar has not been at all injured. At Philadelphia, its foliage and terminal shoots have been browned and injured—but as this tree makes even a new leader without difficulty, it will soon recover. In Mr. Buist's specimen grounds, below Philadelphia, we noticed that a plant of the *Cryptomeria* four or five feet high, entirely exposed, was quite uninjured, thus proving itself hardier than most of the tender evergreens. We believe wherever the *Cryptomeria seedlings* have been planted, this has been found to be the case—where it has been worked on other stocks, it has suffered.

Perhaps the handsomest of all the new evergreen firs that have proved quite hardy, (it is entirely uninjured in our grounds,) is the Himalayan Spruce, (*Abies Smithiana*.) Its general habit is that of the Norway Spruce—but much finer—more luxuriant—more graceful—more vigorous. The Florida Yew, (*Torreya*), is another very handsome tree, quite hardy about New-York. The Cephalonian Fir is very hardy everywhere—and most of the foreign Silver Firs are found great acquisitions—the common European Silver Fir being in every way far superior to our Balsam Fir.

The mildest climate of the northern states is unquestionably that of Newport, R. I. The thermometer fell to zero but three days last winter—and only for a few hours was one below. (By a reference to our last number, page 243, it will be seen that it fell to 2° below in the upper part of Georgia—usually an almost tropical state.) In a visit recently to Newport, we observed in the grounds of DELANCY KANE, Esq., which are quite rich in rare species, that *Araucaria Imbricata*, (the most striking of all evergreens,) which has usually been killed all over the northern states, had stood very well there. In another garden in Newport, a specimen three feet high was perfectly uninjured, without the least protection. *Cedrus Deodara*, six feet high, was perfectly green in Mr. KANE's grounds, and Portugal Laurels, and English Laurels—sadly injured at Baltimore, were in sound condition there. *Cryptomeria* also quite hardy. ED.

MICROSCOPIC INSECTS THE CAUSE OF PEAR BLIGHT.

BY PROFESSOR TURNER, JACKSONVILLE, ILL.

MR. DOWNING—Dear Sir: I am more and more convinced of the utter uselessness of talking about "blight." *What is blight?* Simply the death of certain portions of a tree, in the only way they can die of any sort of sudden disease, while in full sap in warm weather. Any poison or affection that kills in hot weather, will of course, produce blight. However different the *fatal cause*, the sequels, from the laws of vegetation, must be the same. There may be minute differences, but the general phenomena must be similar; and whether the cause is in the root, trunk, or branches, the tree will attempt to throw it off through the externals and extremities, and *there*, to the careless observer, the disease and the death, (or blight, as it is called,) will first appear, though it may have existed for months, or even years, in other parts of the tree, unobserved.

Again, allow me to say, that in our present state of knowledge, the world is but illy prepared to talk or to hear about, either the infinitely small, or infinitely great. We shall hardly be prepared to contemplate the created universe as it is, till we begin to regard with more attention, the infinite above and below us—and to deem it possible that even man may crush microcosms of worlds beneath his pany tread, as the footsteps of Deity scatter stars and suns above and around us.

I have made these remarks with reference to that form of Pear, Quince, and Apple blight, which so fearfully appeared in this state last season for the first time, and to which I alluded in my last paper, as probably caused by a microscopic insect. I am now both sad and rejoiced, to inform you that this is no longer a probability, but a certainty. Rejoiced at the fact of knowing it—but sad at the appalling nature of the fact itself, as you will see as I progress in my statement—which I hasten to communicate to the public—knowing how important it is that all eyes should at once be turned to the true cause, as the only hope of any relief—at least so far as our pears are concerned. I shall present, at first, no theory, but simply state facts which any one can verify at his leisure.

1. Examine the trunks and branches of apples, pears, and quinces. There will be seen little holes in the bark, sometimes two or three together, which look like the pick of an awl. These will more usually be found near the origin of a branch or sprout—and much more frequently to be seen on the apple than the pear, for reasons which will be stated.

Take a knife and cut into these perforations, and you will find the bark dead to the wood, and giving evident signs of poison, or other influence, differing from a similar wound with an awl or simple puncture, as you may learn by making the latter side by side with the former.

2. Sometime in the month of August, take out one of these pieces of punctured bark, in which the puncture has been *recently made*, (as the old ones were used and abandoned the year before,) and lay it in a bright sun-light, under a powerful compound solar microscope, and you will not cut many before you will discover an infinitesimal insect, somewhat resembling in legs, shape, and color, a common "sow-bug," as they are here called, running about between the fibres of the bark, much as a pig runs from side to side through the fence, to avoid the scorching heat of the sun. This discovery I made last August, as stated in a former paper, but was still not quite certain whether this animalcule was a cause or consequence of the blight. But the discoveries of this month, I think, fully decide that question.

I have been watching all winter for the results of this insect, or for its modes of action and transformation; But with the most careful search could discover nothing, and had in fact, almost given up in despair, when one day, by accident, I found it lay *horribly* apparent, right before my eyes—and that I had seen it a thousand times before without knowing it. I will, therefore, prescribe a third experiment in the process.

3. Approach that young pear tree, so healthy, thrifty, and clean—not a blemish can be found on it. Its growth, though excessive (it may be,) appears perfectly sound and good—and even the last cold winter, of 20 degrees below zero, has evidently had no power to injure in the least its glossy trunk, its bark, or even its terminal buds. All is in the brightness of a joyous and storm-defying youth. You, of course, observe little white specks on all parts of the bright brown wood—for such is its nature. But observe again; some of those little whitish specks are larger than the rest, and have the appearance of a mite of mould on the surface of the bark. Well, what strange thing is a mite of mould on a large tree? But there are more, and more, and more, and the longer you look, the more you find. Take now the point of your knife, and press one of these little insignificant patches of mould, and listen closely—you hear a crash under the knife. Ha! you have crushed a little world. You can, even with the naked eye, see its brown blood flow beneath the relentless steel, and though it be a world of pear tree fiends, hostile to them and to you, you will find little cause to exult, when you see how many more such worlds remain unconquered around you. Now take one of these little specks and peel it up from the bark, and apply your microscope, and you will find your speck of mould a most delicate and finely wrought texture of silk, spread as an impervious awning over a great multitude of little reddish brown eggs, of oblong form, and of beautifully smooth regular shape and texture, still so small that scores of them are safely packed under this speck, this particle of a silken cocoon; and even on white paper—to the naked eye are scarcely visible as dust—though most beautifully apparent through the microscope.

4. But once more return to your tree; examine with a sharp knife and a microscope, and you will find on the pear, wherever the eggs are sound, and nearly ready to hatch, the bark, sometimes for one-fourth of an inch round the nidus, is already, (April 1, 1862,) turned a reddish brown, in some cases quite down to the wood, and with every accession of spring warmth, it is constantly extending. These eggs, themselves, seem to be a deadly virus to the bark and sap, especially of the pear tree; and in many cases there is a hole eaten down from the eggs directly into the bark, quite to the wood of the tree, bearing all around it, the evidences of poisonous influence. Whether the parent insect emerged from these holes in the bark, or retreated into the tree through them after depositing its eggs, or simply scarified it for the benefit of its future progeny, cannot be told without future research. Where the branch is not killed, as usually happens on the apple, these holes remain, after all other appearances are gone, still visible to the naked eye. All these manifestations are more usually found near a bud or branch, a short crotch in a limb, or at the points where the bark is changing from smooth to rough, as if partial to places where there is some interruption of flow, or fulness of sap; though frequently on all parts of a peculiarly vigorous growing shoot or limb, where, indeed, the conditions would be much the same.

Now that this is *the cause*, not the consequence, of the blight which appeared here last season, any man that has these eyes may see; and numbers of intelligent men have examined my trees, (of which I have several hundred,) with me, and all concur with me in this opinion. But this blight bears no more analogy to the blight which I described a few years ago as the "sun-blight," than the worms which ate King Herod's bowels bear to

a scalded leg—though a blight—that is death, came of both alike. I do not know that this insect and the consequent blight, has appeared anywhere else except here—if so, it is now easily found, or at least traces of it. If not wait a little—don't complain—you knew nothing about pear blight from any other form of it. In the language of BURKE, "all the horrors of blight before known or heard of, were mercy to this new havoc."

Do you ask why, if the cause is as above stated, what so appalling? Why not destroy the insect at once? Destroy him! the villain!! Sweep down the stars—count out the sands—rehearse all your arithmetic, make millions of billions your unit figure, and there begin your computation, and when you have thus trained your mind to the infinite in number, pray tell me how an insect that could tramp by the thousand through the very bones of your flesh, without disturbing your slumber, can be waylaid and destroyed? If the Infinite One does not work for us, with the periodical changes of all-devouring cold or heat, or those other means by which he checks the career of these infinitissima races, I confess I know not what can be done. What soap, ley, ashes, lime, copperas, sulphur, plaster, tobacco, spirits turpentine, salt, coal-tar, charcoal, assafoetida, and a whole apothecary shop of other drugs can do, I have already tried upon them—and I despair—for unless the season should in some way, by its peculiarities, bring relief, I cannot believe after all my trouble, that my pear trees will one of them exist five years—if, indeed, one year hence, though to a careless observer, not a finer, thriftier lot of trees can be found in the country, than they now are; some shoots grew eight feet long last year, perfectly healthy and sound. True, the washing with soap and tobacco water, and putting coal ashes around the roots, last August, invigorated the trees, and seemed to check the disease for the time, and has evidently kept the insect from depositing its eggs on the parts washed; but there was ground enough escaped the wash for more millions of eggs, now visible in their effects, than there are people on the globe; and what can I do—the covering of the eggs will not admit water or caustic, unless strong enough to kill the tree, I fear, and besides, who can wash all parts of a large tree all over. That peeling off the eggs, and a small slice of the bark, will stop it, I know by trial; but who can spend time to do it where it has got fairly hold, as it has with our trees here; and if one man does it, will his neighbors do the same. I see but these possible courses; either to throw something into the top of the tree, as salt water, or quick-lime when the dew is on, in fine powder, just as the insects are hatching out; or throwing something offensive into the circulation of the tree, by absorption at the root from the earth; or by a strong wash on the bark, and absorption from it, as of lime wash, or ley and tobacco water; or by boring and plugging some offensive substance in the trunk, as has been proposed for the curculio, with sulphur, spirits turpentine and lamp-black, will drive it away, if it can be used without killing the tree.

I have reason to believe that this insect commences its career at the collar or trunk of the tree, and passes through one of its stages or transformations under or near the ground, as intimated by a lady not long since, in your paper; and that the phenomena above described, constitute a second, if not a third period of its history, after the manner of what are called the grand-nurses and nurses, of the microscopic tribes. But this I leave to those better versed in such matters than I can pretend to be; for in this infinitesimal world, I frankly confess I find myself an utter novice. I am even astonished at what my own eyes compel me to believe, and almost in despair at it too. Where is the end of this living dust to be found, in wheat-rust, yellows, grape-rot, and all similar things; if this is the way of this great, coarse, granite world of ours. when you come to see its living atoms, as they are—small enough to gallop full tilt upon nothing—and still numerous enough to eat up the solid globe itself?

The coarse holes or punctures above described, which are seen in the bark, are by no means made by the puncture of the insect. He has no occasion for any such chasms; but they are the result of the sloughing off of the poison he leaves wherever he goes, as you will soon see by cutting into one of them.

In conclusion, I would say that I have been advised by my friends to withhold the publication of these facts till I could take time to trace out thoroughly the history, changes, and remedies, for this fatal insect, whatever its name may be; though were I to christen it, I should call it the "*Pear Devil*."

I read the article of Mr. ALLEN, on pears, in your last number, with great interest, and I reflected that there was millions of dollars worth of valuable property, now in the process of destruction in the United States, as well as my own; and at the hazard of great mistakes, errors, and even of ridicule and contempt, in the present crude state of the inquiry, I have felt it my duty to testify as above, to what I have seen, and to turn all other eyes, at once, and without delay, to this larvæ, while it may yet be seen, thinking that this course gave promise of more safety, and of a more extensive, prompt, and thorough investigation, than any one man, (especially one so busy as I am in other matters,) could possibly make alone. And at all risk of errors, I shall not hesitate to report progress from time time, for we need the million eyes here, instead of one pair; and if others find out and describe more accurately than I can now do, the nature and habits of this pest, (as they surely will,) no one will rejoice more than myself—while I cannot but think that the public will respect my motive for publishing without delay, even after they have from a more thorough knowledge, corrected the errors which almost of necessity must lie latent in any statement made at this point of our research.

Allow me also to say, that since I have been engaged in these inquiries, I have most deeply felt the need of such an *Industrial University*,* endowed by Congress lands in each of the states of the Union, as is recommended in the report of the Granville Convention, a copy of which I sent you. They could be erected, and the nation would never feel it; while it would in a few years double the intelligence, wealth, power, and glory of each state, and the Union at large.

Our state, and I hope several others, will move soon. Can you not say a good word for us? Your own Governor HUNT takes the right view of this matter, I am happy to perceive, as well as many other eminent men among your citizens.

I hope, and barely hope, that either some of the many remedies I have applied, or better, some change or peculiarity in the season, may check the career of this minute but pestilent destroyer, and save my trees yet a little longer; and when the scourge is once past, it probably may not return again for years to come. I notice, also, that trees once severely affected, last season, have not so many, if any eggs on them this year, which incites a hope that the same tree may not be visited but once in the course of its history, with a course of the disease, and that those which escape with life will stand triumphant, as the trees of olden time may have done before them.

I am suspicious, after all, that this is the same identical disease attributed to fungus by Mr. KNIGHT, and others, for its phenomena are much the same; and I myself, settled down in the conclusion that this little flocculi on the bark, (the evident cause of the disease,) was a fungus, until I chanced to hear an egg crack under my knife, and examined with the microscope, and found it as above stated.

I shall call a witness or two if I can, to the facts stated above, as I desire that your

* Which we shall notice in our next. Ed.

readers should give to these statements more credit than is due to a single interested witness, that they may be induced to an earnest and prompt examination, and report on the state of their own trees.

The reason why apples recover from this poisonous influence so much more readily than pears, is, I think, found in the nature of the trees themselves, as seen in the well known habits and tendencies of the pear, toward what may be termed a mortification of tissues, from any wound or puncture whatever, at certain seasons of the year.

I had forgotten to mention that these little nests of eggs will be found much more apparent immediately after a rain, or after wetting the tree, than before, especially on the apple tree, where thousands will then be seen which escape the sharpest eyes when the bark is dry.

I would also suggest boring a slanting half-inch hole into the trunk of the tree, and turning in half a tea spoonful of quicksilver, and stopping close with corks and wax, so that the oxydised mineral may be slowly diffused through the sap, as certain species of insects are killed on trees in the West India Islands. Other substances should be tried in the same way.

And I hope that your readers will let us hear from successful experiments before the ruin becomes complete all over the world; for that this pest will continue to spread by every wind that blows, there is every reason to fear. It is, however, invariably most abundant on my grounds, upon trees nearest to those most affected, and least cared for, last season.

These eggs, when viewed under a powerful solar microscope, appear to be of a cellular texture, and from their little cavities, the bright sun-light reflects all the varied colors of the rainbow.

I find no larvae, as yet, on the peach tree—the color of the bark may prevent this, even if they are there. But on the only two trees on my grounds affected by the yellows, I find those little holes, or the evident traces of their work last year, which induces the suspicion that the yellows in the peach may be caused by the same insect.

Yours truly,

J. B. TURNER.

I am able to add the testimony of my own eyes, to the above statement of facts, by Professor TURNER. I also concur with him in regarding these facts as revealing with a high degree of probability, the cause of the pear blight in its latest manifestations.

SAMUEL ADAMS, Prof. Chemistry, &c., Illinois College.

Jacksonville, April 9, 1892.

P. S. I have never yet lost a single cherry tree since I commenced the habit of peeling them, except one which I peeled in the fall of the year, when quite too small, and the cold killed it.

GREAT VARIETY OF NATIVE WOODS.

BY W. H. DENNING, PRESQUE ISLE, N. Y.

WE were much impressed by a little incident in our neighborhood last summer—showing, 1st, our wealth of forest trees, and 2d, how much more interest foreigners take in them, than natives. A student in the *School of Nimes*, in Paris, wished to procure a collection of samples of the different American woods—showing their structure, grain, &c. A gentleman in our neighborhood, owning a beautiful peninsula of 40 acres on the Hudson—Mr. DENNING, undertook to procure them for him. Sixty species he found on his

own place, almost as many indigenous trees as could be found in any one country in Europe. The remainder, making 107 species, he collected without difficulty. So few persons are aware of the great variety embraced in our forests, that we have asked Mr. D. for the list, for preservation in our columns. ED.

DEAR SIR—Having been requested by Mr. PEABODY, of Salem, to procure for him specimens of American woods, to be forwarded to a Scientific Institution in France, I found in our immediate vicinity 107 varieties, some few of which were brought from the south, but most of them are natives of our own soil. I have taken the nomenclature of Browne's *Sylva Americana*, giving also the common name, and some have only the name they are known by in the country. The first sixty varieties I found on this place; the residue in the mountains in Putnam county. Knowing your great affection for trees, I send you a list of the specimens furnished Mr. PEABODY. Previous to completing the collection, I became very much interested in it, and quite surprised to find so many varieties in our own vicinity. Our mountain wood-cutters take much pride in their knowledge of the different species of wood, and I remarked how very accurate they were in distinguishing varieties in which the difference is not very apparent. I added some specimens not included in the list, which did not reach the size of trees, as I included none under sixteen feet.

Yours truly,

W. H. DENNING.

Presque Isle, Dutchess Co., N. Y., April, 1852.

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| 1. White Oak, <i>Quercus alba</i> . | 31. Long Leaved Cucumber, <i>Magnolia auriculata</i> . |
| 2. Black Oak, <i>Quercus tinctoria</i> . | 32. Black Alder, <i>Alnus glauca</i> . |
| 3. Red Oak, <i>Quercus rubra</i> . | 33. Rock Maple, <i>Acer nigrum</i> . |
| 4. Sugar Maple, <i>Acer saccharinum</i> . | 34. Tulp Tree, <i>Liriodendron tulipefera</i> . |
| 5. White Maple, <i>Acer eriocarpon</i> . | 35. White Chestnut, <i>Castanea vesca</i> . |
| 6. Pitch Pine, <i>Pinus rigida</i> . | 36. Red Cedar, <i>Juniperus Virginiana</i> . |
| 7. Sycamore, <i>Platanus occidentalis</i> . | 37. Red Mulberry, <i>Morus rubra</i> . |
| 8. Hemlock, <i>Abies canadensis</i> . | 38. Cork Elm, <i>Ulmus major</i> . |
| 9. White Ash, <i>Fraxinus Americana</i> . | 39. Honey Locust, <i>Geditschia triacanthus</i> . |
| 10. Red Elm, <i>Ulmus rubra</i> . | 40. Balsam Poplar, <i>Populus balsamifera</i> . |
| 11. Aspen, <i>Populus tremuloides</i> . | 41. Yellow Birch, <i>Betula lutea</i> . |
| 12. Sumach, <i>Rhus typhinum</i> . | 42. Downy Lime, <i>Tilia pubescens</i> . |
| 13. Iron Wood, <i>Carpinus ostrya</i> . | 43. Grey Oak, <i>Quercus ambigua</i> . |
| 14. Horse Chestnut, <i>Pavia lutea</i> . | 44. Hackmatack, <i>Larix Americana</i> . |
| 15. Yellow Willow, <i>Salix vitellina</i> . | 45. Washington Thorn, <i>Crategus poplifolia</i> . |
| 16. June Berry, <i>Mespilus arborea</i> . | 46. Thorny Locust, <i>Geditschia horrida</i> . |
| 17. Barbary, <i>Berberis vulgaris</i> . | 47. Choke Cherry, <i>Prunus serotina</i> . |
| 18. White Elm, <i>Ulmus Americana</i> . | 48. Red Ash, <i>Fraxinus tormentosa</i> . |
| 19. Catalpa, <i>Bignonia catalpa</i> . | 49. Swamp Magnolia, <i>Magnolia glauca</i> . |
| 20. American Large Aspen, <i>Populus grandidentata</i> . | 50. White Pine, <i>Pinus strobus</i> . |
| 21. Bass Wood, <i>Tilia Americana</i> . | 51. Flat Cedar, <i>Thuja occidentalis</i> . |
| 22. Common Alder, <i>Ulmus serrulata</i> . | 52. Rock Oak, <i>Quercus prinus monticola</i> . |
| 23. White Beech, <i>Fagus sylvestris</i> . | 53. Red Bay, <i>Laurus Caroliniensis</i> . |
| 24. Mountain Ash, <i>Pyrus Americana</i> . | 54. Black Walnut, <i>Juglans nigra</i> . |
| 25. Crab Apple, <i>Malus coronaria</i> . | 55. Yellow Locust, <i>Robinia pseudo acacia</i> . |
| 26. Pignut Hickory, <i>Juglans porcina</i> . | 56. Shining Willow, <i>Salix lucida</i> . |
| 27. Sassafras, <i>Laurus sassafras</i> . | 57. Red Mulberry, <i>Morus rubra</i> . |
| 28. Shell Bark Hickory, <i>Juglans squamosa</i> . | 58. White Hickory, <i>Juglans amara</i> . |
| 29. Wild Cherry, <i>Cerasus Virginiana</i> . | 59. Mountain Maple, <i>Acer montanum</i> . |
| 30. Yellow Oak, <i>Quercus prinus acuminata</i> . | 60. Dogwood, <i>Cornus Florida</i> . |

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| <p> 61. Spice Wood, <i>Laurus bensoni</i>.
 62. Hackberry, <i>Celtis crassifolia</i>.
 63. American Strawberry, <i>Eunymus Americana</i>.
 64. Rose Locust, <i>Robinia viscosa</i>.
 65. White Birch, <i>Betula populifolia</i>.
 66. Swamp Oak, <i>Quercus prinus discolor</i>.
 67. Trodraro medecine. [?]
 68. Hornbeam, <i>Carpinus Americana</i>.
 69. Black Poplar, <i>Populus Hudsonica</i>.
 70. Sloe, <i>Viburnum lentago</i>.
 71. Curled Maple, <i>Acer rubrum</i>.
 72. White Cedar, <i>Cupressus thyoides</i>.
 73. Wild Plum <i>Prunus domestica</i>.
 74. Moose Wood, <i>Acer striatum</i>.
 75. Scrub Oak, <i>Quercus catesbei</i>.
 76. Red Beech, <i>Fagus ferruginea</i>.
 77. Red Cherry, <i>Cerasus borealis</i>.
 78. Tree Whortleberry, <i>Vaccinium arboreum</i>.
 79. Leather Wood, <i>Direa palustris</i>.
 80. Water Oak, <i>Quercus aquatica</i>.
 81. Bald Willow, <i>Salix?</i>
 82. Bird Eye Cherry, <i>Cerasus pedus</i>.
 83. Balsam Fir, <i>Abies balsamifera</i>.
 84. Black Sumach, <i>Rhus copallinum</i>. </p> | <p> 85. Common Laurel, <i>Kalmia latifolia</i>.
 86. Bastard Hickory, <i>Juglans myristicifera</i>.
 87. Black Chestnut, <i>Castanea</i>, var.
 88. Butternut, <i>Juglans cathartica</i>.
 89. Small Chestnut Oak, <i>Quercus prinus chinquapin</i>.
 90. Birds Eye Wild Cherry.
 91. Black Birch, <i>Betula ceuta</i>.
 92. Pepperidge, <i>Nyssa multiflora</i>.
 93. Black Ash, <i>Fraxinus samucifolia</i>.
 94. Rose Willow, <i>Salix</i>.
 95. Mountain Pepperidge, <i>Nyssa capitata</i>.
 96. Black Willow, <i>Salix nigra</i>.
 97. Juniper, <i>Juniperus communis</i>.
 98. Ash Leaved Maple, <i>Acer negundo</i>.
 99. Chestnut Oak, <i>Quercus prinus palustris</i>.
 100. Pin Oak, <i>Quercus palustris</i>.
 101. Canoe Birch, <i>Betula papyracea</i>.
 102. Water Hickory, <i>Juglans aquatica</i>.
 103. Mochernut, <i>Juglans tomentosa</i>.
 104. Witch Hazel, <i>Hamamelis Virginica</i>.
 105. Red Birch, <i>Betula rubra</i>.
 106. Prickly ash, <i>Zanthoxylum fraxinum</i>.
 107. White Spruce, <i>Abies alba</i> </p> |
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CRITIQUE ON THE APRIL HORTICULTURIST.

BY JEFFREYS.

On the Improvement of the Vegetable Races.—We are altogether in the novitiate as yet in the United States, so far as much progress in this respect is concerned. What with getting a living, clearing up the forests, subduing the land, getting avenues to market, and looking out for the main chance, we have had but little time to look into the great secret store-houses of nature, and closely examine her beautiful and elaborate processes of improvement. What we have discovered in this line, has been chiefly blundered into by accident; and if we have had any men among us who occasionally devoted any amount of mind to investigation, and published their results to the world, it has been in the ephemeral papers of the day, and in the usual skimble-skamble reading of such as ought to have been instructed by it, the essential benefit has been lost. But thanks to the late encouragement of books and publications set apart to subjects of vegetable physiology, growth of plants, new varieties of fruits, &c., &c., we may now begin to date some real progress in this line. Every thinking mind will subscribe most cordially to the sentiments of the article in question, which is truth, concisely, cogently, and plainly set forth.

You remark: "we are not going to be led into a physiological digression on the subject of the inextinguishable rights of a superior organization in certain men and races of men, &c." Very well, Mr. Editor, you may not, but I am. And you no doubt perfectly agree with me, as every body else will, who has the candor to confess it. There is as much

difference in the *breed of folks*, as there is in the breed of pigs and chickens, or in the different varieties of vegetables. Look at the despotisms of the old world, where men are divided into *castes*, or from the force of circumstances, obliged to move for generation after generation, in one continued sphere of thought and action, from father to son, interminably on, and see how men, under such circumstances, are born and made to differ, although of one *original stock*. Look how particular traits of talent run in different families for many generations, even in this country; and if, after a while bred out by intermixture with blood of a different "gift," the peculiar *faculty* will occasionally creep out, and act with its ancient energy and aptness. So in personal appearances and peculiarities. I consider that our "democratic" tendencies are fast infusing the levelling system among us, either up or down, as the case may be; but as we become better physiologists in the animal world, as well as in the vegetable, we shall fully understand it. I am aware that I am travelling somewhat out of the record, but the idea is suggestive, and it will do no harm to direct attention to it, even in these pages.

The largest Dessert Pear.—Sure enough; and so much the worse. Here is a great, overgrown, coarse, spongy fruit, with not a quarter the virtues in *taste* of one only half its size, of the same kind. If the "Boston folks," give premiums to such specimens, over the close, compact, well grown medium sized fruits of the same varieties, they certainly do a wrong thing. There is very little *merit* in such samples as these; for the same averdupois weight of fruit, in double the number of well grown pears of half the bulk of this specimen, is worth twice the money. A well grown Bartlett, weighing ten or twelve ounces, is large enough for *any* pear, and a Dutches d'Angouleme need not be larger than a pound, for all needful uses, and the development of its best properties. After attaining a full mid-summer size, with fair growth, the best qualities of this fruit are perfected, and no one should strive for anything beyond.

Pear Blight in Illinois.—What a patient, indefatigable man, Professor TURNER is! Why, one-quarter of the difficulties he has to contend with, would wear out the patience of half the modern Jobs in the universe. What with the curculio, the grape-rot and the pear, apple, and quince blight, he must have a time of it! out of all which, I most heartily wish him a safe deliverance. His locality seems to be rife in such evils.

The whole pear-growing community are under great obligations to Prof. T. for his plain and truthful notes on the fire, or sun-blight. His points, no doubt, are well taken—for that locality, if not for others. A specific may possibly be found for this terrible malady; and if investigation will do it, he is the man to ascertain it. The cause of the disease—for disease it is, no doubt—must first be ascertained. That accomplished, one half the battle is won, and a remedy will not be long in the discovery; but whether of easy application, is another question. As in the case of the curculio, it may be more expensive in the application than the disease itself; but it will be a consolation, at least, to know that we have a remedy.

As to the extirpation of the curculio by the frosts killing the fruit, I have my doubts. If there is no fruit to sting, the curculio will live, and propagate his kind elsewhere. I fear they will always be on hand whenever our trees are in bearing.

Hints on the Culture of Gooseberries.—A straight-forward, sensible article—to any one who grows them. But for all edible purposes, a dozen hills of rhubarb are worth half a hundred gooseberry bushes, when you consider the trouble of pruning the bush and picking its berries. Yet, at the rate Mr. THOMPSON'S bushes bear, and the price at which he sells his fruit, they are an object to the humblest gardener, who is under great obligations for this plain and well illustrated communication.

Notes on Country Seats Near Boston.—I doubt whether your correspondent is correct in saying that the houses are too small, or that the barns are too large. That is a very strange fault to find with country seats generally; they are quite too often apt to differ the other way. The chief fault, I apprehend, if fault there be, is, that the relative *position* of the barn is not right, as to the house. Never recommend a man to build a *large* house. The tendency is too much in that direction already, and where one builds too small and compact, twenty build too large and too expensive. A man who *sets out* to find fault with the country houses about Boston, may, no doubt, find abundant material for his occupation; but I doubt whether there is a place in the world where, taken altogether, so much good taste in the aggregate has been displayed, as in the neighborhood of that city. The land is naturally poor, wretchedly so, compared with good American land. It is rocky almost everywhere, swampy in places, and not over picturesque at the best; but there are many sweet spots, which the ingenuity of man has moulded out of the most forbidding materials. No, No. The Puritan blood of old Massachusetts has beat the whole American world in subduing a sterile soil, and smoothing away the rugged places; and instead of finding fault with what they have done, the wonder is, that under such difficulties they have accomplished half so much as is shown in their charming retreats, their suburban houses, and beautiful grounds.

What would the Bostonians have done had *they* possessed the promontories on the Jersey side of the Hudson river, the pallisades, the highlands above, the grand belts of wooded, and the fine swells of open land, along the river, through Rockland and Putnam, and Orange and Dutchess, and Ulster counties, with *their own* spirit of improvement, and the wealth of New-York to back up their suburban taste and enterprise? Or about the more level precincts of Philadelphia, even? A different sort of improvement would have been made *longer ago*, and in somewhat better taste, I fancy, than exists in many instances.

The Hydraulic Ram.—An excellent notice of one of the most useful inventions of the age. Every man who has a stream of water which he can make available, should at once adopt it, where the stream lies too low to spout the water into his yards and buildings. The agricultural stores all have them, cheap and good; and they are so simple in their management, that no apology should be admitted for their absence, where needed.

The Orange Pear.—Tut, tut, gentlemen. This Orange Pear, if it has any merit, will take care of itself. It used to be a pretty good fruit over in Jersey, in old times; and I should be sorry to learn that it had lost either its good manners, or good qualities in Buffalo. I've been thinking that some of these *ipse-dixits* of the apple conventions would fall out one of these days. It always was, and I fancy it always will be the case, that *positive* gentlemen will be mistaken in their opinions once in a while. Let us have the pear baked and preserved, the first "done brown," and the other "transparent;" and if you will suffer *me* to be the judge, you shall have *one* honest judgment, to say the least of it.

Those Grand-Island orchards I should like to see. I hobble out to Niagara once in four or five years, and if the *swimming* is good—for I don't suppose you have any ferries in that wild country—I may try to get over there and take a look at them. I beg of you, both Col. HODGE and Mr. ALLAN, not to be afraid of planting, for when our two belligerent parties of the state get the enlarged Erie canal fairly dug out, the eastern markets will be ready for them.

The Snake Plant of South America.—If this story be not a "Munchausen," I don't know what is. It smacks too much of the "penny-a-liner," and DICKENS, and "Household Words," for me to believe. There are, no doubt, plants in South America that will cure the snake bites—or, perhaps, by taking them internally—ward off their poison, for

such we have in this country, which the Indians know all about; but the *personal* part of the story is sheer gammon.

The Great Palm-house at Kew.—A pretty picture, and a great work of art. But I cannot help thinking how many comfortable cottages for the shivering and destitute poor, of which England is full, the building of this royal toy would have made, and how much comfort the same outlay of money would have bestowed in some such way. The Palm is a great, grand, and rare plant; and so are the pyramids great, grand, and rare structures; yet I don't see why people might not as well go to Africa, or India, to see the one, as to Egypt to see the other. It is a luxury of which I cannot well see the utility in so *much* expense.

Thorough Draining the Soil.—Too valuable an article to be tucked away into the double columns of the further end of the book. This experiment is a *perfect* one of the kind, and an illustration of the benefits of *thorough* draining that must convince the most unbelieving in its efficacy. Where we have so great a field for the selection of soils at low prices for agriculture, as in this country—much of which is of such composition that it needs no such process to render it productive—its necessity is not so apparent; but wherever soil is occupied, and at any price over fifty dollars an *acre*, which *needs* draining, and it can be done for twenty-five or thirty dollars additional expense to the acre, there can be no question of its economy.

For *gardening* purposes, on *heavy* soils, it is almost indispensable. To be sure, there are few pieces of land that will warrant the expense of Mr. LIVERMORE's lot, under his process; yet even that, on so small premises, will pay. Field crops have been doubled by the ordinary simple process of under-draining alone; and not only doubled, but the crops made *certain* in *all* seasons. Drain tile is now getting so plenty and cheap, that *good* lands can well afford it, and *poor* lands of the proper kind, and well situated, can be made to pay richly for the improvement.

JEFFREYS..

PRACTICAL HINTS ON GROWING CALCEOLARIAS.

BY A WORKING GARDENER.

AMONG the many objects of delight, there are few more interesting to the cultivator of plants, than the Calceolaria. I scarcely know what genus of plants is more interesting, when we take into consideration their diversity of color, and the rich, vivid markings of their corollas, and the airyness of their general appearance, when seen in full bloom. In the rapid strides that horticultural science has made of late years in England, the cultivation of the Calceolaria has not been overlooked.

The original old yellow species was shrubby; then the herbaceous sorts were introduced, of which *yellow* was the pervading color of the flowers, and from the latter, through incessant perseverance, have sprung all the numberless varieties that the most fantastical taste can desire. From the herbaceous yellow species, we have now varieties with the white, cream, purple, lemon, and chocolate grounds, with their unique spots of brown, maroon, and white; and lastly, the hybridizer's art has so nicely controlled color, that he has produced the varieties with stripes equal to that produced in the Carnation; nor is this all—for he has also so modified the *form* of the flower, that its original *long, ribbed, oystershell* appearance, has been replaced by the globular form of the cherry, having narrow throats, and highly colored caps.

Amateurs in general, consider the culture of this plant rather difficult. I have, myself, seen number; under what is termed cultivation, in most miserable condition, huddled up together in small pots, struggling for existence, and placed so far from the glass that they vainly sought to reach more light a long way off—their leaves like cork-screws, devoured and distorted by the green fly. The buyer gets a set of these plants—pays a pretty good price for them—gets them home in the fall of the year, and they remain, most probably in the same pots, till they flower, producing a stem like a screw, with two or three stunted flowers to crown its miserable appearance; and should the cause be inquired into, the reply is, “the *climate* don’t suit them;” a few hot days in this stunted condition, exposed, perhaps, to the direct burning rays of their life destroyer, Sol, and lo! they are gone as the gourd of sacred history.

This is the way that more than half the Calceolarias are grown—destroying the reputation of the parties who sell, by not answering the high description given, and the totally disappointing the purchaser. As for myself, I am not aware of a class of plants more easily grown with a little care, under the following provisions. Remember, in the first place, that Calceolarias require no more heat than a cabbage, and that the green fly, or *aphis*, is their deadliest enemy. If allowed to remain a day, they suck out the juices of the leaves, and the consequence is, the foliage contracts, curls, and twists up, and when that takes place, all the fumigation and care you could afterwards bestow, would be useless. I invariably consider a plant half dead, when I see its foliage curled by *aphis*. Guard against this insect, and you have achieved the great imagined difficulty in the culture of the Calceolaria. The remainder is simple and easy, and as follows:

I commence with *seedlings*, and if proper attention is paid to *crossing*, there is always something interesting and amusing in their development. In fertilizing flowers for seed, select those of the half shrubby varieties—they will stand the hot summer better; use no flowers but such as are good in form; never cross a blotch with a spotted variety, or a striped with a spotted one, if you wish to improve your sorts, as the progeny will generally be nothing more than a jumbled up mixture.

Keep spots, blotches, stripes, and self-colored varieties, crossed respectively in their own class, and after a little practice in this art, you can form a pretty correct idea at the time you are fertilizing, of the ultimate results of your labor.

In raising seedling Calceolarias, you should sow your seed early in August, in broad pans or boxes of sandy earth, covering it but very slightly, and remember never to allow the surface of the soil to become dry. Cover it over thinly with moss, or some such material, as will prevent quick evaporation. There is generally a great difficulty complained of in getting the seed up. It is generally sown and watered—and watered again when dry—and so on, and probably never comes up at all. The simple fact is, the seed when first damp begins to germinate, and if it is then allowed to become dry, it is, of course, killed in the germ. Keeping it constantly damp will obviate this.

As soon as the young plants make their appearance, they require transplanting into pans or boxes of richer soil, and placing in cold frames close to the glass. When they are sufficiently advanced in growth, pot off into three inch pots—keep them cool and near the glass. Repot the young plants always (by turning out the ball,) as soon as you perceive the roots touching the side of the pot; do this irrespective of any prescribed month, until you have them in the sized pot you wish them to flower in. I generally flower them in nine inch pots. If you use rich, open loam, with plenty of well decomposed cow manure, giving the plants good drainage and plenty of water, you will be able to see the true character of your seedlings. Act as above laid down, and the leaves of your seedlings will

measure something like twelve inches long, with a corresponding amount of flower. When the bloom is over, those you esteem worthy of propagation may be readily increased in the following manner. Take some old frames, select a north aspect, and place the back of your frame to the north; put in drainage, and fill up the frame with good, rich, open compost. Then plant out your Calceolarias, giving them a good watering; shade and keep them close for a day or so, to induce them to root. In this situation, if attended to, they will produce a multiplicity of cuttings. To be successful in striking, requires a little carefulness. Four inch pots, well drained and filled with sand, are the best for this purpose. The cuttings should be taken off four or five joints long, placed around the sides of the pot, and well watered.

Take a little box, a yard square and nine inches deep, glazed air tight, placed over an excavated piece of ground of the same dimensions; place the cutting pots on the ground, cover up with your box, and tread the soil tight round the sides. In this simple manner I have struck eight thousand between August and November. The cuttings are never allowed to flag for want of water, or you may as well throw them away at once. In three weeks they will be ready to pot off. I seldom take the box off before the expiration of that time, unless they appear to be *very* dry. When struck, pot off singly in three inch pots.

The next process is the system by which to produce a specimen plant. If you do not require your best selected seedlings for propagation, after they are out of flower, and prefer growing them as specimens for the ensuing year, my process is as follows: When out of flower—cut down, select a north aspect, and plunge up to the rims of the pots; early in September, partially disroot, re-pot, and place them in a close frame; keep them there until you perceive indications of growth; then give air, syringe frequently with water slightly colored with soap; continue potting and re-potting, as directed for the seedlings, and at every potting lay the growing branches regularly all round the pot, and fasten them in their positions with hook pegs. The last potting should be early in February. I then generally use a pot from fifteen to eighteen inches diameter, (what some of our friends about Albany call *hogsheads*,) pot with rich, open soil, and neatly and regularly peg the shoots down over the surface, and as they continue to grow, continue to peg down; they readily emit new roots from the shoots as they are laid down, and will produce a great number of shoots; and all that are not required should be taken off, which will materially strengthen the selected branches for flowering. Towards the end of March they will throw up their flower stems, which will require to be supported, and properly arranged with small sticks, so that the plant will form a globular mass of well arranged flowers.

Amateurs who feel an interest in the cultivation of the Calceolaria, by following this simple treatment, as laid down, will produce a plant when in flower, that will measure four feet diameter, with something like a hundred, or a hundred and twenty flower stems to one plant. But I would here remind amateurs, that he who waters without ascertaining if it is required, or lets his plants remain pot bound, or potting them "*when he has time*," or permits them to be devoured with aphids, must never expect to realize such a specimen as above described.

A WORKING GARDENER.

May 4, 1862.

[A good practical article—by one whose beautifully grown plants we have, if we mistake not, seen more than once. Very few of our floral readers in this country know the curious beauty of the new hybrid Calceolarias, and those who will follow the directions given by our correspondent, will find themselves amply rewarded. Ed.]

THE ACACIA DEALBATA—HARDY IN FRANCE.

BY BAPTISTE DESPORTES, ANGERS, FRANCE.

FRENCH horticulture, always seeking to increase our enjoyments, has accomplished a valuable result for the ornament of our parks and landscape gardens. After several years of experiment, it has succeeded in the open air culture of the *Acacia* (or *Mimosa*) *dealbata*.

This tree, so well known in all green-houses, a native of Van Dieman's Island, was first introduced into England in 1818, and into France in 1824. It has proved since then, every year, the greatest ornament of the green-house and the conservatory, growing so luxuriantly, that in a few years it reached the roof, whatever may have been its height elsewhere.

Few green-houses are high enough to allow it to accomplish the development of which it is susceptible; and such is the vigor of its growth, that very often it forces itself through the roof, struggling to attain that freedom of development that nature has granted it. There is something so wonderfully beautiful in its perfect inflorescence, that few persons familiar with good exotic collections, have not frequently paid a just tribute of admiration to this remarkable tree. What can be more graceful than its smooth branches, of a beautiful glaucous green, clad with its delicate persistent foliage of the same color, its myriads of gay, golden flowers, lighter than down, and seeking to envelop it with a floating cloud, gilded by the first beams of the morning. No description can do justice to the lightness, the elegance, and the grace of this truly lovely tree.

Mr. ANDRÉ LEROY, whose taste in horticulture is universally known, could not behold this tree, upon which nature seems to delight to lavish her gifts, without regretting that it should not be able to attain all its proportions in his extensive nurseries, so as to embellish with its masses of beauty, the numerous parks and plantations which he forms every year. Being desirous to know to what extent it could endure the rigor of the winter, he planted several in the open air, which not only resisted without injury, the most intense cold known in the south of France, but which soon established a growth such as we were not acquainted with in any other tree.

Several of these *Acacias*, planted three years since, merely against a wall, with a northern exposure, are now sixteen feet high; their branches nearly six feet long; the flowers which cover them are so abundant, and so finely relieved against the back-ground of glaucous foliage, that they resemble a large golden sheaf of the most graceful and elegant form. Others, planted at the same time, and entirely in the open air, that is to say, without any protection, are not at all inferior to the first, in luxuriance and vigor of growth.

The first tree of this kind planted in the open air at Angers, is now eight or nine years old, and more than twenty-six feet high; its branches are nearly eight feet in length, and extend in every direction, bending under the astonishing mass of its flowers. It is not possible to do justice to the beauty and the brilliancy of the bloom of this tree; and whoever has not seen it in all its splendor, can form but a very imperfect idea of it.

One remarkable fact about this *Acacia* is, that it continues to grow all the year round, and even during the winter months, the vegetation scarcely seems to be arrested. The flower-buds begin to appear at the end of summer; they remain in perfect preservation until the first fine days of spring; and towards the end of March, when the gardens begin to throw off their winter garb, the tree rapidly bursts into its greatest beauty.

Angers, which seems the chosen country of *Flora*, and for that reason, doubtless, has

been called "the Nursery of France," is situated between the 47th and 48th degrees of north latitude; the temperature is tolerably uniform, although the centigrade thermometer sometimes falls there below 12°, (5° above zero of Fahrenheit;) but there are none of those sudden changes which are so injurious to vegetation, in disorganizing the tissues. The severe frosts occur generally in December and January, and a thaw almost always takes place during a cloudy and foggy season, owing, no doubt, to the influence of the four rivers which surround Angers, and whose fogs counteract, by intercepting them, the rays of the sun. Owing to these favorable circumstances, we are able to cultivate in the open air, so great a number of plants, such as Camellias, and evergreen Magnolias, which do not succeed so well even in countries farther south than the city of Angers. Besides the above mentioned frosts, they also occur in March and April, of three, four, and five degrees, and sometimes more; these, although less severe than those of winter, are, however, much more injurious, because they occur at a season when vegetation is already under way, and when all the sap-vessels are much more sensitive to atmospheric influences.

The soil of Angers and its environs is argillaceous, resting upon a stratum of silicious rock of great depth, but permeable to water; it is easily warmed; the deposit of vegetable earth varies from eighteen to twenty-four inches in thickness.

I have entered into all these details of the nature of the climate and soil, in order to give a clear idea of the circumstances, in the midst of which the open air cultivation of this Acacia is accomplished; a tree which, for a long time, it was not thought possible to cultivate except in the hot-house or conservatory.

When I take into consideration the vast extent of the territory of the United States of America—when I recall the luxuriant and varied vegetation covering the different portions of that western soil, and which I was never weary of admiring when I had the happiness of visiting it, I do not doubt that the southern and temperate latitudes are as favorable as our own, and that the open air cultivation of this superb Acacia may be equally successful, which will add still more to the natural riches of those pretty country seats, whose beauty is only equalled by the vegetation that surrounds them.

I shall be happy, if, in introducing to the readers of that excellent Journal, the Horticulturist, so beautiful an acquisition to horticulture, I might be able to induce some of those similarly located as to climate, to attempt experiments, the success of which will repay them for their efforts.

BAPTISTE DESPORTES,
Nurseryman at Angers, (France.)

[We hope some of our readers in the southern states will profit by M. Desportes' valuable hints. No doubt this, and other Acacias, would be found perfectly hardy as far north as Columbia, in South Carolina.]

EVERGREENS—THEIR USE AND CULTURE.

BY JAS. RICHARDSON, JR., DEDHAM, MASS.

WE have often thought of painting, as a lesson and study for our friends in various parts of the land, who have the good fortune to reside in the country—two pictures; the one representing a house pleasantly situated, but wholly without shrubbery, lawns, or shade trees, bare, naked, and dreary as Sahara; the other, its counterpart, depicting the same house, charmingly environed by green and velvety lawns, with blooming shrubbery, fine shade trees, and groups of beautiful evergreens. And, we cannot but believe, that the

latter picture would so much surpass the former in its attractiveness, as to have a very striking effect upon every beholder, and help to bring about a great and delightful change in the appearance of country seats, farms, and villages. It is true, that the old destructive system of cutting down and burning up everything in the shape of a shade tree,—thanks to the efforts of yourself, Mr. Editor, and other philanthropists like you—has fortunately been banished from the civilised parts of the country, and that there is a growing interest in planting the graceful Elm, magnificent Maple, and other noble natives of the forest, around our houses, and along the lines of our streets, at least—and that men of real taste and intelligence are doing something more than merely setting out long, stiff, formal rows of shades; but still, the soul as well as sense, is continually pained at sight of bleak, bare hills, and stark-naked, staring houses, baking in the summer's sun, or shivering in the freezing blast of winter. Indeed, though we have in our northern states, six to eight months of winter—as witness the season now so grudgingly passing away—yet, in all our rural embellishments, we have scarcely given a thought to the *improvement and adornment of the wintry landscape*. And, notwithstanding that many of the most beautiful evergreens in the world are indigenous to the soil, there is hardly an instance where they have been employed to any extent among us. When we reflect that the graceful, feathery Hemlock, the fringed and sombre Black Spruce, and the sun-shiny Yellow Spruce—which, when well cultivated and flourishing, can scarcely be distinguished from his more fashionable cousin of Norway)—the stately spires of Fir,—the grand and noble White Pine—the curious and beautiful Holly—the pyramidal Arborvitæ—the rich green of the low growing Yew—the splendid Rhododendron, and the Magnificent Mountain Laurel, are all found, growing in wild luxuriance, even within the borders of “the old Bay State,” we shall see how unnecessary it is to go abroad for beautiful evergreens, and wonder that these native resources for adorning our grounds and villages, and especially for *embellishing the wintry scene*, should have been so utterly neglected.

Use gives fitness and propriety, and hence use is an element of beauty. And a fine evergreen tree, like all things else in nature, is not only a beautiful object in itself, but the idea of cooling shade in the summer solstice, and protection and defence against the inclement blasts of winter—the idea of use adds a new charm, and has the effect to enhance the pleasure one experiences at contemplating a luxuriant group of such trees. When the hills, and fields, and plains, are stripped of their leafy verdure, and all is bleak and bare, or covered as far as the eye can see, with a dreary expanse of cold and drifting snow, what a relief to the wearied vision, what a charming and beautiful effect does a line or group of living verdure, here and there, give to the wintry and desolate scene. We were strongly impressed with this fact, in visiting, during the last winter, a beautiful New-England village, in which some of the earliest inhabitants had the wisdom and good taste, years ago, to plant, here and there, groups of such trees; and we remarked, that they not only relieved and beautified the dreary sameness of the snow-clad scene, but that they seemed even to give a positive warmth and comfort. And we have no doubt, that on places exposed to the cold winds, they would contribute very much, not only to shelter human dwellings with their denizens, from the severity of their winter assaults, but that planted on the north side, and thus not in the way of the sun-shine, they would form quite an effectual barrier against the severe boreal blasts, afford a protection to fruit trees, and even to tender shrubbery, and really prevent the frost from striking down deep into the soil. Even setting aside all considerations of beauty, we would advise the planting of belts and screens of evergreens, for the sole purpose of protecting gardens, orchards, and the ground itself, from freezing winds. Many a choice exotic shrub, and tender delicate

plant, might live and thrive under the fostering shelter of a group of evergreens, that otherwise could not survive the cold of our northern seasons.

In the *grouping* of trees in planting, nature, as in everything else, should be our teacher, and our model. Nothing appears more awkward, and displeasing to the eye of taste, than a stiff, straight row of deciduous or evergreen trees, standing in one rigid, uncompromising line, like so many petrified grenadiers. If we turn our eyes to the fields and the meadows, we shall observe the wild trees and shrubbery gathering themselves into charming companies, or single spreading trees, dotting irregularly here and there, the emerald carpet of waving grass. And if we would produce an effect, either lovely or picturesque, we must follow beautiful nature, avoid all stiff, straight lines, all precise regularity and uniformity, and dispose our trees in graceful groups, with here and there a single tree of fine form and habit, resting its rich dense foliage upon the green lawn. Evergreens have a very natural and pleasing effect, planted upon a slope, or steep bank—especially if there be mossy rocks—different shades of green being mingled by way of contrast; or, if we wish to give the appearance of distance, to place those with lighter hue and finer foliage in the back ground, with those of more sombre colors, such as the Fir and Black Spruce, and the Pines with coarser foliage, in front. This, though difficult to manage, has the effect of perspective. Larches may be combined to advantage with the evergreens in the back ground. A collection of beautiful evergreens, tastefully arranged, with an underwood or bordering of Rhododendron, Kalmia, and our rich, green, trailing Yew, is one of the most charming pictures that can meet the eye, *in winter especially*. There are certain trees, however, we confess, that lose much of their beauty by being crowded in with others, and only appear to their best advantage when set alone. This is particularly true of the Hemlock, and the Black and Norway Spruces, and the Aborvitæ; at least they should form the outside of a group, while the stiff, ungraceful Fir, gives the finest effect by thrusting its tall spires through the masses of softer foliage, by which it should be surrounded. Evergreens, however, when set alone, should be allowed to grow naturally, with their lower branches leaning upon the lawn. Indeed, nothing is in worse taste than an evergreen with its branches lopped off half way up. It is but half a tree. It resembles a wretched man, who has undergone some surgical operation that has taken his arms off to his shoulders; and we should as soon think of shaving off the wavy, silken tresses of a fair girl—Chinese fashion—up to the crown of her head, as of mangling in this way a beautiful tree. The Black Spruce, with its thick-tufted, and dense foliage, of sombre deep sea-green, the Norway, with its fringed branches of bright gold-bronzy hue, and the graceful feathery Hemlock, are objects of unwearied delight, when thus treated. If the upper branches tend, when young, to overshadow the lower, they may be easily clipped, so that those below may never suffer from the exclusion of sunlight and air.

CULTURE.—The great objection that we meet with in urging our friends to plant evergreens to adorn the wintry landscape, is, "That it is so hard to make evergreens live." As we were admiring, the other day, two beautiful specimens of the Black Spruce, said the lady of the house to us, "When they were given to me, I merely made a little hole just large enough to crowd the roots in, and stuck them down, and they have grown finely." We expressed, to her great surprise, our regrets that they lived at all. They *ought* to have died. Whenever a tree is just "stuck down" in that way, without any care or love—with such a perfect indifference as to whether it lives or dies—I am always glad, from the principle of the thing, to have it give up the ghost. But care in planting, is not the only thing to be considered, if you would have your evergreens live and thrive. It is of primary necessity, that *the roots, while out of ground, should be kept moist—that they*

never for a moment even, should become dried during the process of transplanting. To this end they must not be exposed to sun or wind. If this rule is observed, in ninety-nine cases out of a hundred, your trees will live. We have taken pains to test this in various ways. A few summers ago, early in the season, we set out a long screen of *Arboretas*, taken up and sent us from the woods of Maine. Our good Uncle, a skilful horticulturist, said that we should lose a very large percentage of them; our "minister" also *en fait* in such matters, prophesied their speedy death; our neighbors declared they couldn't live. We were careful to have them taken up with the sod on, in a damp stormy week. Six of them we set aside in a tub of water. Some three or four we left exposed to a drying wind, though the day was cloudy. We did not cut or trim them in the least, and out of two hundred and ten trees, we only lost four—the four we had left exposed. The six we had placed in the water were neglected for three weeks or more, till, finally, we carelessly planted them, with little thoughts of their surviving, though in a disadvantageous situation. They all lived. Again: in planting some fifty Norway Spruces, from four and a half to six feet high, we were careful to have them brought us in a moist day. The sun, however, came out, before we had finished setting them, and one of the best of the lot was somehow or other overlooked, and allowed to remain a number of hours with the roots exposed to the sun. It died; but all the rest have done well. We might give other illustrations, but we proceed to the second point; which is, that the trees should be carefully planted. The best manure for evergreens is peat earth, or vegetable mould, mixed with ashes, and allowed to remain if possible, through one winter to be decomposed, and then mixed with part sand or sandy loam. We tread down a layer of sods in a trench—dig deep to withstand drouths—then throw in, with our first layer of peat earth compost, a quantity of stones, large and small, to retain coolness and moisture, of which evergreens generally are so fond. We then mix the top loam with the compost, in finishing up the operation of planting, throwing in enough water with the earth to have it settle around the moist roots.

Thirdly. It is important that transplanted evergreens, to grow and flourish, should be kept wet and cool. To this end we must mulch; and, for evergreens we prefer fine hub chips, saw dust, or spent tan, (though for fruit trees meadow hay is better,) as with a little ashes, they make a good manure for the next year. Always select small young trees, before those that are large, especially before those that are old and stunted in their growth; they thrive much better; and large trees in the process of rooting are likely to lose their foliage, and much of their beautiful spray and branches, and thus become unsightly, scraggy, and desolate looking objects enough. The best time for transplanting evergreens is in the May or early June storms; they may, however, be taken up and do well at any time of year, if these precautions are taken—although the *very best season is just as the buds are swelling to burst*, and before they have started and grown so as to wilt in the hot sun.

Of the varieties of evergreens, their different characteristics, of the beauty and extent of the native kinds, we hope soon to speak further, as well as of the effect of their judicious grouping, in a future article. The evergreens, indeed, that are indigenous to our own soil—if there were no exquisitely feathery and graceful *Deodars*—no rich green, strange, coral-like *Aracarias*, so long and so difficult to acclimate,—no dark sombre *Yews*,—no solemn, grand "*Cedar of Libanus*," no fringed spruce of Norway,—would be all sufficient to cheer and warm and enliven the wintry scene. The thick verdure of the Yellow Spruce with its lively hue, seems to shed sunshine around in the gloomiest day;—and what border or shrubbery is more rich or charming, than a grand group of *Kalmia*

latifolias with its glossy Camellia like leaf, and glorious wealth of noble and stately flowers. But our space forbids us to indulge in further description now.

JAMES RICHARDSON, JR.

Dedham, May, 1852

SACRED AND CLASSICAL PLANTING.

BY JAMES GRIGOR, NORWICH, ENGLAND.*

TREE planting in general has been actively prosecuted of late years; but there is one section of arboriculture which has not, in my opinion, been carried to that degree of perfection of which it is susceptible. I refer to Sacred and Classical planting, or the congregating together of such trees as are interesting purely on account of the almost holy associations which they invariably awaken. To some, this subject may appear to be but of trifling import; to others, I am happy to say, the idea is fraught with an importance which the uninitiated have little conception of.

To underrate any description of planting is by no means the object of this paper. Such an attempt would meet with little sympathy in a country which in pure love for the sylvan features of nature takes precedence of all the nations of the world. Yet, although the ligneous productions of the earth, wherever found, are highly prized in this country, there are unquestionably some which, by association alone, are wrapped up in a more interesting garb than others. It is true the trees of America, Australia, and India, are, equally with those of Palestine and Greece, "*tabernacula quæ fixit Dominus*,"—"the tents which the Lord hath spread;" yet, who hears in any of them those whisperings of an antiquity loved and dwelt upon? Those countries may boast of their eternal forests, but still they are unconsecrated. The American and Australian ligneous floræ are especially devoid of any accompaniment derived from fame. The arts and sciences have as yet no temples there which will be thought of in after ages, and, consequently, no link has been formed with existing objects or individuals. Poetry in those countries has not yet taken up those images presented by their magnificent sylvæ, and set them to the end of time in verse. Their forests, therefore, indicate only the changes in the vegetable world everywhere going on—a gradual approach to maturity—that maturity gigantic and long-lived—and then a like gradual descent to decay and death. Hence it is that the humble thyme plant, not a foot high, nourishing the apiaries of Hymettus, lives in the recollection of mankind, whilst the loftiest Platanus on the Ohio awakens no retrospective sentiment whatever.

In these matter-of-fact days, it will be asked, of what use is biblical and classical planting? To this question it might be sufficient to refer to the numerous and earnest pages that have been devoted by natural historians to such plants referred to in sacred and classical works, as are now of dubious identification; for example, the Mustard tree, the Hysop, and the Lily of the valley; but it may be stated at once that planting such trees forms a pure source of pleasure, inasmuch as it leads back the mind to some of the holiest and best days of the world, and serves invariably to suggest some of the finest passages of its history. To youth, especially, such trees form the best means for awakening the lights of antiquity; all its greatest actions, all its holiest and sweetest spots, live in such productions, and are thus easily impressed on the mind. In biblical times, we find the patriarchs expressing themselves in earnest language with reference to trees as ornaments to

* London Horticultural Magazine.

their last resting-place. Thus, "Let us have the field, and the cave which is therein; and all the trees that are in the field, and that are in the borders round about; and let them be made sure for a possession to us." In classic Greece, whether on her hills, beside her streams or mossy fountains, trees had a prominence and importance such as they never had since. In that country, nature was not only allowed to make herself heard and seen, but she was energetically encouraged. Her umbrageous valleys and odoriferous uplands were filled with gods. Woodland temples rose on all hands. Every leaf which expanded itself was appropriated to religion; so that, independent of her usual verdant covering, she wore here a rich mythological tissue. Hence it was that a wreath of an evergreen formed the noblest reward that could be conferred on the most distinguished citizens. That circumstance alone will give all "possible eternitie" to the laurel.

One of the first trees in sacred association is the Cedar, a native of a lofty ridge of mountains in Syria. In winter Lebanon is always clad with snow, which, towards the north-east, where it is sheltered from the sea breezes and sunshine, remains sometimes during the whole year. The tree is therefore perfectly hardy in the climate of England, and is, of course, appropriate for that description of planting now under review. Perhaps the most promising young plantations of this tree in Britain are those of Sir George Macpherson Grant, of Ballindalloch, in the north of Scotland. The cedars are planted on the sides of sandy hills, which before were partially covered with trees sufficient to cause shelter, but not so close as to interfere with the proper development of the cedars. This, in my opinion, is the best way to get up a crop of this tree; for it is naturally disposed to become merely a spreading bush, without any stem; but when the chief supply of air is overhead, it naturally forms a good leading shoot. Technically, it requires to be *drawn up*. A new and grand feature in scenery is sure to be the result of an elevated plantation of this tree in maturity.

Gazing upon this object, the reflections which it excites are numerous: It was seen from Jerusalem, casting a "weight of glory" over the lofty mountains which environed that city like a magnificent rampart. It grew on that site whence the eye commanded a spectacle more glorious, perhaps, than was ever enjoyed from any other spot on the globe, embracing a view almost without interruption from the waters of the Mediterranean to the confines of the Persian Gulph. It was peculiarly the tree of Palestine. It was the belief, that God loved it more than any other tree. It was seen on all the hills of the holy city,—planted extensively by Solomon around his seat there, and personally recommended by him, as a most desirable ornament throughout Judea. Figuratively, this plant seems to have formed the general standard of excellence,—the Hebrew poets having had continual recourse to it as a fitting source of illustration. Had the graces of the church to be described, it was by a reference to Lebanon and its cedars;—the prosperity of the righteous, it was by a metaphor borrowed from this tree—"He shall grow as the cedar of Lebanon." Whatever was comely and majestic in the human countenance, or whatever commanded the love and reverence of the beholder, was aptly illustrated by this celebrated object. To see Lebanon and its cedars was, in ancient times, accounted a great privilege; and the anxious desire with which Moses and the people of Israel, whilst journeying in Egypt, looked forward to this favored part of the Land of Promise, may be gathered from the earnest language of the patriarch:—"I pray thee," he says, "let me go over and see the good land that is beyond Jordan, that goodly mountain, *and Lebanon*."

In its living state, the cedar, no doubt, conferred a very peculiar and striking character to the scenery of the east; its depth of green, and the disposition of its branches, rendered it "for glory and beauty" unequalled amongst all the objects of the vegetable king-

dom. Mechanically considered, it was equally sought after and prized. Jupiter's sceptre was attributed either to the cedar or cypress, a symbol of the eternity of his empire, because the tree was considered free from corruption. In the temple of Apollo at Utica, the wood of this tree was found nearly 2,000 years old. Sesostris, king of Egypt, built a vessel of 280 cubits, gilded without and within, with the cedar wood. It is highly probable, too, that king Solomon, who "made a navy of ships in Ezion-geber, which is beside Eloth, on the shore of the Red Sea," drew largely upon Lebanon for such an undertaking; but whilst there is some doubt on this point, it is certain that the timber employed in building the sumptuous Temple and palace of Jerusalem was of this tree, and of the growth of Lebanon. "All was cedar,—there was no stone seen." It appears, further, that the infatuated idolator chose this wood for forming his favorite images; for it is recorded, that in a Spanish oratory, consecrated to Diana, some centuries before the destruction of Troy, beams and figures of this wood were found of great antiquity. In the famous Ephesian temple, the statue of the goddess, "whom all Asia and the world worshipped," was reputed to be of this material, as was the most of the timber-work of that glorious structure. The idol, too, "which fell down from Jupiter," so closely consulted by those at Ephesus, was fashioned of the same wood; and it is probable that the most of the "graven images" of all idolatrous nations were of cedar, because in ancient times it was not only greatly prized for its beauty, but invested with imperishable qualities. Such are some of the traits of the cedar, one of the grandest ligneous products of either hemisphere, and far excelling others in sacred historical remembrance. It rightfully takes its place on the tops of mountains, and associates, naturally, with no trees except its own kindred—the pines and firs. Though generally dwarfed and stunted in this country, by being placed in situations and soils unfavorable to the development of its unrivalled character, it may be seen in a few instances exhibiting something of that extraordinary beauty which distinguished it in the days of Solomon, and rendered it the boast of Syria.

Cavillers there are who insist that the cedar of the Bible cannot be that of Mount Lebanon, as the tree cannot be considered very lofty. Let all such get a sight of a tree of this sort, growing at the seat of Robert Marsham, Esq., Stratton Strawless, Norfolk, a noble, upright specimen, with a branchless trunk of about forty feet.

Next in importance is the Oak. It will not be necessary to dwell at any length on this tree, as its associations both sacred and classical are well known to every one. The object of this paper is to offer, if possible, new and striking features. It is scarcely to be wondered at that this grand object bearing, when in perfection, such an immense burden of boughs and spray, with a tufted, irregular, and consequently picturesque outline, should have been selected as an object worthy of so much veneration. A chain of exalted remembrance is linked to it in the mind of all those who have read any classical author; and in the bible there are several incidents connected with it, sufficient to hand it down as a venerated object to the latest ages of the world. The patriarch Abraham spread his tent under the oak of Mamre, and formed a grove of this tree for the accommodation of his family and friends, where they might rest their weary limbs and drooping bodies in the heat of the day. Under an oak Joshua set up the tabernacle of the Lord, that the congregation might with comfort perform the public services of religion. How highly the descendants of Jacob valued those oaks which grew on Bashan may be gathered from a remark in the book of Ezekiel with reference to Tyre—"of the oaks of Bashan have they made thine oars." Throughout the east it was customary to bury the dead under an oak, so that the relations might sit over the grave screened from the fierce heat of the sun. This imperial plant, even

"Jove's own tree,
That holds the woods in awful sovereignty,"

was well known all over Greece, and forms the basis of many a Hellenic legend. According to some, Jupiter's might was derived from the oak; and with a disinterestedness worthy of imitation, he no sooner felt its power within him, than this father of gods and men set himself to the task of teaching mankind to live upon acorns, so that they might participate in his puissance. The temple and oracle of this god in Dodona, the most ancient in all Greece, was surrounded by oaks, which, with the ground in the neighborhood, was endued with a prophetic spirit. The oaks, therefore, became endowed with this gift, and delivered oracles. So far as the classic page is concerned, the voice of antiquity directs us to no tree more generally than the oak. It grew chiefly and in great abundance on the slopes and heights of Hellas, introduced, it is true, near to residences, for the sake of its umbrageous and cool arches in summer time; but still in its greatest perfection in the magnificent solitudes far from the busy hum of men. The state of art, of poetry, and elegance in Athens might have been pretty correctly ascertained from a simple fact connected with this object—the intense, yet discriminating delight with which the people looked upon the beauties of the oak in its numerous varieties, during its gorgeous autumnal appearance. Notwithstanding our advance in civilization and refinement, and love for sylvan imagery, it is questionable whether we are yet up to the mark of that taste which the Athenians exhibited in all that relates to trees and planting.

The Mulberry is generally reckoned as a biblical tree, but it is very doubtful if it has really a right to be so included. Loudon, without inquiring whether our translators were right in rendering the original term *baca*, at once concludes that the tree is twice mentioned in the sacred writings. Hasselquist states, that the mulberry scarcely ever grows in Judea, very little in Galilee, though abounding in Syria and in the mountains of Lebanon. In Chronicles, the term *becaim* is rendered pear trees, and Aquila and the Vulgate have it in the same way. Parkhurst gives it as his opinion that *baca* means a kind of large shrub from which is distilled an odoriferous gum, and in this opinion he is strengthened by the fact that the Arabs have a shrub corresponding with this description, which they likewise call *baca*. Its other associations rest on a clearer foundation. Pyramus, who lived in Babylon, became enamoured of Thisbe, a very beautiful virgin of that city. The flame was mutual, but their parents forbade marriage, so that the lovers regularly interchanged sentiments through an aperture in a wall which separated their houses. They agreed to meet at a given time at the tomb of Ninus, which was overshadowed by a white mulberry tree, and without the walls of Babylon. Thisbe was first there, but the unlooked for arrival of a lioness frightened her away; and as she fled she dropped her veil, which the lioness found and left covered with blood. The lover soon after arrived, and having found Thisbe's veil bloody, concluded that she had been torn to pieces by wild beasts. He instantly stabbed himself. When she had so far recovered, Thisbe returned, and when she saw the dying Pyramus, she fell upon the sword with which he destroyed himself. The mulberry tree was stained with the blood of the lovers, and ever afterwards bore fruit of that color.

Standard mulberries should invariably have a strong stake set up beside them to keep them in an upright position, and this should be continued until the tree is at least twenty years of age. The prevailing characteristic of mulberry trees throughout England, when left entirely to nature, is, that they are one-sided and top-heavy, requiring props to support them. This defect might be easily remedied by applying the aid alluded to. The trees should be planted in sheltered situations, in rich trenched soil, kept up by frequent manurings. When so treated the fruit is large and juicy.

The Pomegranate (*Punica Granatum*,) Pliny informs us, was first found near Carthage. It is the *malus punica* of the Romans, and the *rimon* of the Hebrews, probably from *rama*, to project, from the strong projection or reflexion of light from the star-like crown of the fruit which bears the upper part of the calyx. The highest estimation in which this tree was held in the land of Israel may be inferred from the fact, that it was one of the three kinds of fruit brought from Eschol to Moses and the congregation in the wilderness; and from its being distinguished by the rebellious sojourners as one of the most delicious luxuries they enjoyed in Egypt. No circumstance more clearly evinces the value which the eastern nations put upon this fruit than the choice which king Solomon makes of it to represent certain graces of the church—"Thy temples are like a piece of pomegranate within thy locks." The ornaments placed in the net work over the crowns which were on the top of the two brazen pillars of Solomon's temple were carvings of this fruit, as were also those decorations ordered to be fixed on the skirt of Aaron's robe. Greece was full of it. That district known as the land of Pindar, Hesoid, and Plutarch, was in particular noted for rich crops of this fruit. Agatharchides relates the following anecdote connected with this tree: A dispute arising between the Athenians and Boeotians, respecting a spot called Side, situated on the borders, Epaminondas, in order to decide the question, took out a pomegranate from under his robe, and demanded of the Athenians what they called it. "Rhoa," they replied. "Very good," said Epaminondas; "but we call it Side, and, as the place derives its name from the fruit which grows there in abundance, it is clear the land must belong to us." And it was decided in favor of the Boeotians. In fine seasons it produces its fruit of the full size in this country when trained against a wall.

The fig tree is frequently mentioned in the Holy Scriptures, and is common throughout Palestine and the east generally. Amongst the ancient Hebrews it was known as *thaena*, signifying the tree of grief, probably from the leaf causing inflammation when applied to the body. It was of this tree that our first parents, immediately after the fall, twisted for themselves girdles or aprons. Throughout the Holy Land the failure or destruction of the fig tree was accounted one of the greatest public or private calamities. Hence it is said, "Although the fig tree shall not blossom, &c., yet I will rejoice in the Lord." In ancient Greece this fruit tree was well known and extensively cultivated. It was the pride of Attica. According to the traditions of the Athenians, figs first grew on a spot not far distant from the city on the road to Eleusis, thence called Hiera Suke, "the sacred fig tree." So much prized was the fruit here produced, that the inhabitants were forbidden to export them. This law, however, was often contravened, and the informers against the delinquents were called *sycophants*, or "revealers of figs;" a word which has since been in use to characterise mean-souled, dastardly persons, such as informers generally are. Naxos, a celebrated country in the Ægean sea, was celebrated for its fig trees, which were especially cherished by Bacchus, who was the chief god of the island. Here this divinity obtained the title of Meilichios, "the gracious," because he taught them the use of this fruit. In the processions of this god the fig was carried next to the vine. Throughout Sussex the fig is planted as a standard; and it is in this character that it can be best introduced in a classical group with others.

To the Olive tree the Sacred Writings abound in references; it has been from the earliest ages the emblem of peace, and the bounteous gift of heaven. In the garden of the Horticultural Society at Chiswick, and in several parts of Devonshire, it grows as a standard, and survives the severest winter. In other counties, therefore, it may be made to flourish with the aid of shelter. This tree rose plentifully all over Judea, and so viewed, ex-

cites a crowd of interesting reflections in every well disposed mind. Thus it is often figuratively used in the poetical diction of the east. Speaking of the righteous man, it is said:—"His branches shall spread and his beauty shall be as the olive tree."

The most distinguished, and to many, the most endearing reflection, suggested by this tree, arises from its giving the name to that Mount, (the Mount of Olives,) so famous in the history of the Saviour. This mountain lay a little out of the city of Jerusalem, towards the east, commanding a full view of the metropolis, from which it was separated by the valley of Jehoshaphat, and the brook Kedron. To it the Redeemer of the world was wont to retire in the evening, after he had spent a laborious day in teaching the multitudes that attended His ministry in Jerusalem; from it, He gazed upon the city, wept over it, and predicted its final overthrow. In the garden, which lay at the bottom of this hill, He commenced the scene of His last sufferings; and from the highest or central elevation, He ascended into Heaven. The olive crowns the top of the hill till this day; and from its being so remarkably long lived, it is thought by many, that the vicissitudes of eighteen hundred years have not yet swept away the identical objects under which our Redeemer wandered. To many superficial readers of the Bible, and especially to those who rest implicitly on our translation of it, the olive tree forms a stumbling-block not easily removed. The plant, as is generally known, does not produce leaves of a deep green color, though properly enough classed amongst our evergreens. The leaves resemble those of the willow, are of a light, or yellowish green, and sometimes rusty underneath, and do not equal the expectations of travellers. Thus Mr. Sharpe, while in the East, observes: "The fields are in a manner covered with olive trees; but the tree does not answer the character I conceived of it: the royal Psalmist, and some of the sacred writers, speak with rapture of the green olive tree, so that I expected a beautiful green; and I confess I was wretchedly disappointed to find its hue resembling that of our hedges when they are covered with dust. The olive tree may possibly delight in Judea, but undoubtedly will disgust a man accustomed to English verdure." Now, it so happens, that the word translated *green*, means vigor, or freshness; and every one must know that exuberant vegetation is not necessarily of a green color, but frequently of a red or pinkish tinge. In Daniel, the seventy translators render the same word *flourishing*: for it is absurd to suppose, that when King Nebuchadnezzar said,—"I was at rest in my house, and green in my palace," (as it is in the Hebrew,) he referred to color. The passage in the Bible, therefore, should be rendered:—"I am like a *vigorous* olive tree in the house of God." Rich harvests of this tree waved over the plains of Greece; and it is yet an inhabitant of that highly favored country. It presents nothing magnificent—nothing solemn, for it never exceeds fifty feet in height; yet its loveliness, and sunniness, amply compensate for its shrub-like size. A warm, dry air seems to suit it best. Hence it was found in greatest perfection in Attica and Cilicia. In those countries, where regularly propagated for its oil, it was the practice to plant the trees thirty feet apart, so as to allow the air to circulate freely about them on all sides. This tree forms a favorite haunt of singing birds, having a thin shade, sufficient to shelter them from excessive heat, yet not excluding much light.

The Almond, mentioned in the Holy Writ, was by the Hebrews called *shakad*, signifying to watch, or awake, because after the rigors of winter, it is one of the first to hail the coming of spring. This idea seems to be referred to in the vision which Jeremiah the prophet had. "The word of the Lord came unto me, saying, Jeremiah, what seest thou? And I said, I see a rod of an almond tree. Then said the Lord unto me, Thou hast well seen; for I will hasten My word to perform it;" or rather, "I am hastening or watching over my word to fulfil it." The rod of Aaron was of the Almond tree, as were also the

rods which the princes of Israel bore. The tree has an interesting history in Greek mythology. Demophoon, the son of Theseus and Phædra, on his return from the Trojan war, visited Thrace, where he was tenderly received and treated by Phyllis, a beautiful queen, whose charms were not unappreciated by him. He retired to Athens, of which he was king, promising to return to Thrace at the end of a month. At the expiration of the time, the queen wandered daily on the sea-shore looking out for her lover, and when at last winter came and he returned not, in an agony of despair, she fell dead by the sea-side, and was immediately changed by the pitying gods into an almond tree. Her lover soon after returned, and hearing what had taken place, flew to the tree and clasped it in his arms, when the love of Phyllus, unable even then to restrain itself, caused the tree, though in winter, to burst forth into blossoms. The beauty of this tree when in flower, at a time when others have not begun to bud, renders it a most desirable object near to residences. It is the first to interrupt the reign of winter, and consequently the earliest forerunner of the coming spring.

The Apple tree is mentioned in Holy Writ; but I am inclined to believe that our apple, (*Pyrus malus*.) is not the tree alluded to in the Sacred text. In Canaan, and the surrounding country, it is almost worthless, and is by no means entitled to the praise bestowed on that tree by the Spirit of inspiration. The inhabitants of Egypt and Palestine import their apples from Damascus, their own orchards producing no fruit fit for use. It is impossible, therefore, that a tree whose fruit was represented to be most delicious and comforting, could be found in the "crab, or wilding," whose fruit, according to Pliny, had "many a foul word and shrewd curse given it," on account of its sourness. Besides, the apple of the Scripture is classed with the vine and fig, palm and pomegranate, as furnishing a grateful repast, and the failure of which was reckoned a serious calamity,—an unquestionable proof, that we must look elsewhere for the real apple of the Holy Land. In Patrick's Commentary, it is thought that the word *Thepucheem*, translated apples, denotes any species of fruit emitting a fragrant odor; but this definition is too vague to be useful. The term occurs in six passages of Scripture, and in them all it is given as an appropriate title to one of the noblest trees in the garden of Nature. "As the apple tree among the trees of the wood, so is my Beloved among the sons; I sat down under his shadow with great delight, and His fruit was sweet to my taste." Again:—"Stay me with flagons, comfort me with apples, for I am sick of love." "A word fitly spoken, is like apples of gold in pictures of silver." Now, when it is known that trees of the citrus family flourished in Judea several centuries before the birth of Christ, and when it is recollected how appropriate the passages quoted become, when applied to the citron or orange, there is little doubt of their referring to the genus just mentioned. Flourishing under oriental skies, the citron becomes a large and beautiful tree, having a perennial verdure, and perfuming the air with exquisite odor. It is with peculiar propriety, therefore, that the spouse exclaimed:—"As the citron or orange tree among the trees of the wood, so is my Beloved among the sons. I sat down under His shadow with great delight, and His fruit was sweet to my taste." Those who are desirous of trying orange and citron trees in England, may take courage from the fact that they grow to a large size, with a slight protection during severe winters, at Salcombe, near Kingsbridge, in Devonshire; and at Dartmouth, Luscombe, and Kitley. I am inclined to think that if spaces were cleared in plantations, with an open space to the south, these trees might be planted in such places with every prospect of success. In severe weather, the tops and stems might be thatched with dead branches, and their roots covered with dry litter, and also thatched. This is the fruit which King Juba describes as the apple of the Hesperides, by which name it was

known throughout Africa. The most ancient Greek writer who describes this tree is Theophrastus, who says it was grafted on the common apple to produce black citrons, and on the mulberry, for the sake of getting the fruit of a reddish color. Such things are quite impossible; all statements like these tend only to weaken the testimony of this great naturalist in other matters, and show clearly how closely the earliest efforts in history are allied to the works of the mythologists. This tree thrives remarkably well in Lower Egypt; and in the Garden of Heliopolis, where it shades the Temple of the Sun, it appears in matchless beauty. It is questionable whether the citron was known to the ancient inhabitants of Hellas; for Antiphanes observes in his *Bœtian*, that it had only been recently introduced into Attica:—

- "A. 'Twould be absurd to speak of what's to eat,
As if you thought of such things; but, fair maid,
Take of these apples.
B. Oh! how beautiful!
A. They are, indeed, since hither they but lately
Have come from the great king.
B. By Phosphoros!
I could have thought them from the Hesperian bowers,
Where th' apples are of gold.
A. There are but three!
B. The beautiful is nowhere plentiful."

Viewed in connection with the present subject, the Vine forms a most important tree. No effort of mine can add anything to the delight with which this well known plant is looked upon by all nations. The classics seem to have written under its shade: their pages exhale the sweet odor of its fruit. It is frequently mentioned in the Old and New Testaments. It was known to the inhabitants of Judea, both in its wild and cultivated forms, though the former, in all probability, was not, strictly speaking, a vine. It was certainly not the *Vitis Labrusca*, or Fox Grape of Botanists. In the vales near Jordan, not far distant from Jericho and the Dead Sea, is found growing in great abundance, the vine of Sodom, which produces fruit as bitter as gall, and according to Bishop Lowth, as deadly as the poison of a serpent. This deleterious grape is alluded to by Moses in terms fully bearing out this description: "For their vine is of the vine of Sodom, and of the fields of Gomorrah; their grapes are grapes of gall, their clusters are bitter, their wine is the poison of dragons, and the cruel venom of asps." The tree, however, referred to so often in the Bible and in Classic Song, is the grapevine, (*Vitis vinifera*), well known throughout all the temperate zones of the Old World, as an exuberant climber, and producing the noblest and most delicious of beverages. Thus, in contradistinction to the spurious plant, our Saviour, in the Gospel of John, says, "I am the true Vine, and my Father is the Husbandman." And again, in the triumphal Song of David on the plagues which desolated Egypt, and procured the liberation of his ancestors, he says: "He destroyed their vines with hail, and their Sycamore trees with frost." Of all the grapes produced in the East, those of Canaan were considered to be the finest. Dandini, an Italian traveller, and accustomed of course, to see grapes in great perfection, was surprised at the extraordinary size of those produced in the vineyards at Lebanon, which were of the size of prunes, and of the most delicious taste. In the book of Numbers, it is stated that a bunch gathered in the valley of Eschol required two men to carry it some distance, a fact which has been recently confirmed, if any proof had been needed, by Doubdon, who met with very extraordinary vines near to Bethlehem. Persia seems entitled to the honor of giving birth to this plant; thence it appears to have found its way into Judea, Greece, and Sicily, and soon after into Italy, Spain, France and Britain. It is, however, contended by

Theopompos, that it was the inhabitants of Chios, an island in the *Ægean* sea, who first found it, and cultivated it, transmitting it to the other Greeks. This point must forever remain in uncertainty, for as Homer refers to the vineyards of his heroes, the natural conclusion is, that it was plentiful in Greece before the historical era. Throughout that country, sandy swells or eminences facing the morning sun, were fixed upon as the best sites for this plant, and to this day, south-eastern declivities are preferred to any other aspect. It is worthy of remembrance, perhaps, that the first instructions in the art of pruning the vine, so as to induce it to bear more plentifully, was borrowed from an ass browsing upon it, and for this hint a marble statue was erected in honor of this quadruped in the maritime town of Nauplia. The vine was sacred to Bacchus, and throughout Greece, when the labors of the vintage were concluded, scenes of Bacchic enthusiasm and excess were yearly enjoyed by the youthful rustics engaged in that glorious harvest. The references to the vine in the classics, are endless; and he who has the leisure and inclination to search for them, will not long look in vain. I have seen the vine planted in England near to Elm trees, on which it found a suitable space to spread its branches; and I recollect in the garden of the late Mr. Loudon, at Bayswater, several vines were so planted, which bore remarkably well. It is necessary that the branches of the elm should be thinned sufficiently to admit light and air, otherwise the grapes will not ripen. In this form it had better be introduced in a collection of sacred and classical plants, choosing the English elm, (*Ulmus campestris*.) as its support, as that tree was also known to the Greeks.

The Juniper is twice mentioned in the Holy Scriptures. Commentators are in great doubt and uncertainty regarding the tree to which the inspired writers allude, arising from the somewhat absurd idea of keeping the English juniper continually before their eyes. It would, indeed, be hard to fancy that the prophet Elijah found a refreshing shade under a shrub a few feet in height, without any pretensions whatever to the character of being umbrageous. The difficulty, however, is quite uncalled for; and the fact that our divines are so much divided concerning this tree, proves how necessary it is that those who profess to illustrate the Scriptures, should have an intimate acquaintance with natural history, or at least the aid of those who know something of that subject. In all probability, the juniper of the Bible is the *Juniperus drupacea*, a native of Mount Casius, in Syria, and identical with those seen by Bellonius on Mount Taurus—trees which reach the height of a cypress, with a broader head, and therefore more likely to be chosen for shade and shelter. It appears the juniper was resorted to in the days of Job for food; and it is so far corroborative of the supposition hazarded, to know, that at the present day, the inhabitants of the mountains above referred to, eat the fruit of the *J. drupacea*, which is of the size and shape of an Olive. Be this as it may, there is not the slightest occasion to seek a substitute for the juniper of Holy Writ, in the Genista, or Spanish broom.

The Myrtle has a clearer genealogy, and comes down to us as pure and odoriferous as it grew in the gardens of Cimon, Pericles, and Epicurus. Those were the chief patrons of Flora; they had the myrtle planted in great profusion on mounds, freely exposed to the breeze, so that when the plants were in flower, the winds came laden with an odor rivaling that of the rose. This shrub is Grecian all over; whether we look at its form, the size, shape, and color of its leaf, its exquisite fragrance, or the form, color, and scent of its flowers, the classic stamp is upon it. This favorite denizen of Hellenic lands, was dearly loved by the Greek; in his eye it was instinct with divinity, and wherever he saw it, his fancy represented to him a most beautiful maiden of Attica, fairer than all her countrywomen. The tree was peculiarly sacred to Venus; her temples were invariably skirted with it; and under the favorite name of Myrtilla, she was adorned throughout Greece.

Full of the traditions of his country, and accustomed to hear the Myrtle associated so constantly with such traditions, it is not to be wondered at that this plant was adopted by him as the *sine qua non* to temples, gardens, streams, and splashing fountains. In the festival of Europa, at Corinth, a myrtle crown, said to be ten yards in circumference, was borne in procession through the city. The priests of Aphrodite shaded their foreheads with wreaths of myrtle, and the statue of that matchless goddess herself was often crowned with a circlet of the same plant. It was worn by the Athenian magistrates, as well as by all those who had gained bloodless triumphs. It was the reward of victors in the Olympic games; and at Rome the ladies put the leaves into their baths, fancying that this plant of Venus must be favorable to beauty. The general selection of the Myrtle was well made; for it is questionable whether any other would have stood the test of being used in such multifarious ways, and especially as ornaments to the masterpieces both of nature and art. In all classical groups this tree should have a prominent place; and in order to encourage such planters, I may mention that young plants nine inches high stood out in my nursery last winter uninjured. The cause of its succeeding so indifferently as an open air plant, in Britain, is certainly on account of its being by most nurserymen kept in doors during cold weather, and treated as a green-house plant; whereas it is clearly capable of accommodating itself to this climate, and growing wherever the Arbustus will thrive. The allusions to this plant in the bible are few. Referring to the effect of the Gospel, or the reign of Christ on the state of the world and the dispositions of mankind, it is said: "Instead of the thorn shall come up the fir tree, and instead of the briar shall come up the myrtle tree."

In the Gospels of Matthew, Mark, and John, the Hyssop is mentioned. It grows on the mountains around the city of Jerusalem; and as it is plentiful in Calvary, it is probable that it was a handful of this herb that was plucked, imbued with vinegar, and applied to the parched lips of the dying Saviour.

The Box tree is another biblical tree, but the sacred allusions to it are slight. In the Augustan era the Roman villas were profusely adorned with this tree clipped into a variety of figures. In Greece it appears to have been kept rather in the back-ground.

The Pine and Fir are also mentioned in the sacred text, but the references to them are not sufficiently clear to warrant any identification.

I close the biblical list of ligneous plants suited to the climate of Britain with the Rose. Great diversity of opinion exists among the learned in relation to the true meaning of the term *habetzeleth*, in our version of the bible translated Rose. The Seventy interpreters, with Jerome, render it "the flower of the fields." Others think the Asphodel is meant, or some other kindred bulbous-rooted plant, and in support of such supposition, the rendering of the term is so far favorable—*habab*, he loved; and *batzel*, a bulb or onion. At any rate, there is not the slightest doubt that the Rose was known and appreciated in biblical times, though there is some ground for supposing that the species of our genus (*Rosa*) are not referred to in the passages of Scripture.

THE NEXT POMOLOGICAL CONGRESS.

DR. BRINCKLE of Philadelphia, the President of the American Pomological Congress, has given public notice that the next meeting of this body, will be held in Philadelphia on the thirteenth day of September next. (See circular, among Society notices for this month.)

This will be the third session of the Congress of Fruit Growers—the first having been held at New-York, and the second at Cincinnati; and there are several reasons why we are led to believe that it will be the largest and most interesting meeting of the kind yet assembled. In the first place, Philadelphia, being in the heart of the middle states, is more centrally situated than any other place that could be selected. In point of climate and variety of horticultural products, that city stands midway between the north and the south, between New-England and the valley of the Mississippi. She stands in the very centre of the great *peach district*, and we notice with pleasure, that the time of meeting has been fixed earlier than usual, partly, no doubt, with a view to a more extended exhibition of this most delicious of all fruits. Perhaps it is still rather late, but we hope by the aid of ice houses and fruit preservers, it will not be found materially so. Baltimore and Washington can, as we know from the evidences of our own senses, show specimens of this noble fruit that will make northern pomologists feel a sinking of the heart, and the eastern shores of Maryland—from all that we learn, can produce samples of pears that will awaken the competition of the well tried pomologists of Massachusetts.

As Philadelphia is pre-eminently the focus of beautiful plants, and as the Congress will meet in the Chinese Museum building, which is the familiar exhibition ground of the Pennsylvania Horticultural Society, we may expect to have the cornucopia of Pomona gracefully festooned by the loveliest garlands of Flora. There can be no doubt that, altogether, the meeting will be one of no ordinary attraction to all the devotees of Horticulture.

And having said this for the merely superficial interest of the meeting, let us glance at the deeper meaning, and more intrinsic value of this biennial gathering of the fruit growers of the whole Union.

Any body may learn horticulture on his own account, without going to school, or taking lessons from masters. Most persons, in fact do so—practicing in their own gardens, in the traditional way handed down from father to son—from one generation to the succeeding one. They may even, by the aid of books and practice together, acquire a very high degree of knowledge in the matter. This is being *self-taught* in the art; and with many pleasures, there are, of course, many drawbacks and errors in this mode of acquiring information.

Horticultural societies, and journals of horticulture, may be considered the *common-schools* of the art—where, by the help of practice at home, prizes and competition in public, and stated *rehearsals* of all the best talent exercised on the soil, the competitors are stimulated to new exertion, and the taste of the local neighborhood is carried forward and raised to a higher level.

A national congress of cultivators, like this Pomological Congress, takes a still higher ground, and may fairly be considered as the *University* of horticulturists for the country at large. It is, in the first place, composed mostly of picked men, sent as delegates by all the horticultural and agricultural societies over the whole country. They are men of the widest and most thorough experience in the respective districts to which they belong. They bring with them the ripest knowledge, gathered in the field, orchards, and gardens, of their respective states. They exhibit specimens of the products of our widely diversi-

fied soil and climate, to show what each state can produce, both naturally, and by the aid of high culture, and a more beautiful and interesting display, it is not easy to find in any country.

But the interest of the thing does not—as in most horticultural societies—the common schools of horticulture—stop here. In fact, it just commences where those of the societies end. It commences by the discussion—free to all interested in such topics—of the various subjects within the scope of the congress, such as the culture of fruits generally, the comparative merits of different varieties in various parts of the whole Union, the unanimous or partial approval of some varieties—the unanimous or partial condemnation of others; interspersed with lively descriptions of various modes of cultivating, and different degrees of success or failure, all which have the deepest interest for every man who owns a patch of ground which he either cultivates, or hopes to cultivate. When we add to this, that most of the speeches are made by men who are really the yeomanry of the country, who, though they deal in few flowers of rhetoric, illustrate their strong positions by “showing their hands” with good fruits in them, as the best proof of what they and mother earth can do; men whose opinions may lastingly damn or establish the character of a pear, but who, at least, never “pair off,” (like their namesakes in the capitol,) to avoid giving their honest opinions.

Judging from the previous sessions of the Pomological Congress, we have no fear of want of either interest or numbers at Philadelphia. All that we fear is, that the members will come with plenty of ideas—but ideas badly arranged and digested. As it is true that the great majority of delegates sent there, are men who are full of experience, and precisely that experience which it is desirable to get out of them for the good of the public, it is no less true, according to our observation, that they are not men in the habit of condensing their thoughts, or so arranging their ideas, as to present their experience in the shortest and clearest manner. This is all from the want of the habit of turning the subject over in their own minds, and so putting it in order, that they can most clearly impart their knowledge and experience to others. It is also true, that many whose duty it is to report to the Congress on the condition of the fruit culture of their own district, neglect to prepare or arrange any materials till the very week of the meeting, or perhaps till the very day when it takes place. Hence, much of the general value of the comparative results are lost to the assembled body, because they cannot be digested and prepared by the chairman till the meeting is over. We state these facts now, for the purpose of urging them upon the attention of the chairmen in the different states, and begging them to make memoranda and collect materials for their reports from this moment—that of the ripening of the earliest cherry to the time of the meeting itself.

Now that the fruit growing of the country is no longer a pleasant pastime merely—but produces many millions of profit to the country at large, it is worth while for the leading cultivators to remember that their biennial Congress, which, as we have said, is our horticultural university is about to assemble *this season*, and every one interested is expected to do his duty in the furtherance of all the interests which it seeks to advance.

Domestic Notices.

AN ENGLISH NATIONAL SCHOOL HOUSE.—[See FRONTISPICE.] Our engraving of this month, shows one of the National School Houses at Tamon, lately erected at the cost of about £1,000. It is interesting chiefly as a study of the quiet domestic character which the English give to this species of building. One can easily believe that something of home affections and love for good order and neatness, would naturally grow up in the mind of every pupil educated in such a school.

The first thing that strikes an American eye is the "very humble" appearance of the building, arising from the lowness of the walls. But this is, internally, amply made up by the great height of the roof—the whole space being open, and the under side of the timbers and wood-work of the roof being exposed to view. This gives a lofty and spacious appearance to the interior, and an abundant supply of fresh air—connected, as the space is, with every means for ventilation.

This style of building will hardly be followed exactly in this country, but there are many details, and some hints in composition about this domestic style, that are well worthy of study by those designing, or about erecting buildings of this class.

FUCHSIAS.—The skill of the gardener in producing new varieties, is nowhere more delightfully shown than in the new Fuchsias of the last three or four seasons. The utmost delicacy and brilliancy of color, the finest foliage and habit of growth, and the most exquisite gracefulness and perfection of form in the flowers, are united in the new Fuchsias—which we notice in our advertising columns of last month, several of our leading growers now offer at very moderate prices. It is unfortunate for the Fuchsia, as a popular flower, that it will not bear our bright sun, and dry air, and hence is of no value as an out-of-door plant. But to all who have green-houses, it is an invaluable treasure, during all the summer months, when those said green-houses were formerly the most shabby of all places; for the stages now covered with Fuchsias, (which being dormant during winter, may

be kept in a warm pit,) the house is, indeed, more attractive from June to September, than even in winter.

A great deal has been written about the culture of the Fuchsia, but it may be simplified within a very brief compass; for soil, take two-thirds leaf mould from the woods, one-third fine sand; for atmosphere, syringe the plants every way plentifully, for they love dampness, and dull the lights with a thin wash of whiting, or something equivalent, to guard against excessive sun-light. We know an amateur who grows them very successfully in a small house covered with cheap muslin frames—the whole structure, 80 feet long, not costing as many dollars—and preserving the plants in a pit in winter. Fuchsias demand some care certainly, but there are few plants that so well reward amateurs, as these lovely specimens of *nature's jewelry*.

VINES FOR VERANDAS.—A question very often asked, is, what are the best vines for verandas? Some of those usually employed for this purpose, are, though beautiful in themselves, very objectionable on account of insects. The common sweet scented honeysuckle is an example of this kind. Among hardy plants that are woody, and therefore permanent, there are few more satisfactory than the *Prairie Roses*. Their remarkable vigor, their habit of retaining the freshness of their foliage all the season, and the wealth of beautiful flowers they bear during this month, united to their perfect hardiness and adaptation to almost every soil, renders them deservedly great favorites. Among the best of them are the following: *Linnean Hill Beauty*, light rosy blush; *Triumphant*, lively red; *Baltimore Belle*, white; *Queen of the Prairies*, rosy red; all very double and profuse bloomers. These prairie roses grow with such great luxuriance, that they will, in rich soil, entirely cover the columns of a veranda, or piazza, the second season. A friend of ours renders them much more ornamental than usual by budding Madam Duprez, Mrs. Bossanquet, Aimee Vibert, and other free growing, ever-blooming roses upon the long shoots, thus forc-

ing the climbers to put on, partially, the dress of the Bourbon roses, and flower more or less all the season.

Among the hardy *clean* woody permanent climbers—there are none more beautiful than the Chinese Wistaria—with its superb masses of fresh gray or lilac flowers in May. The yellow trumpet Honeysuckle—with blossoms the most delicate straw color, all the season, is not half so often seen as it deserves; the Chinese Honeysuckle, with deliciously scented particular blossoms and sub-evergreen foliage, is particularly well suited to verandas with a northern aspect; the Dutchman's Pipe, with a magnificently large dark green foliage, is perfectly hardy, and the most picturesque of climbers, for situations where a bold effect is desired.

These are the best of the permanent woody vines for verandas. For those who have bare columns at this season, and wish to cover them at once, we recommend the following *Summer climbers*—to last only the season, and which will grow from 8 to 15 feet high and flower profusely. *Cobea scandens*—very rapid grower, large purplish bell shaped flowers. *Maurandias*—pink, purple, and white, three sorts all exceedingly pretty, growing 10 feet high. *Lophospermum*—pink, or pale purple, two sorts, 15 feet high. *Solanum jasminoides*—delicate white flowers, blooms very freely, 12 feet. *Ipomoea Learii*—a rich blue convolvulus, 20 feet high. *Pergularia odoratissima*—profusion of fragrant white flowers, 15 feet high. These can be had in pots at most of the Florists, and it is not yet too late to turn them out for the summer—especially if the soil is made light and rich. Among the prettiest *annual vines*, are the Canary bird flower (*Tropeolum canariense*), and the Cypress vine.

QUINCES LOVE SALT.—The quince tree seems to have a constitutional fondness for salt. We have never seen such superb specimens of this fruit, and such a general luxuriance of the trees, as at Newport, R. I.—on the sea coast. A gentleman who noticed this fact, several years ago, told us lately that he had profited by the hint, in giving to each of his trees a top-dressing of two quarts of coarse salt every spring. By scattering the salt over the surface it dissolves slowly, and does no harm whatever to the roots,

but makes both foliage and fruit much more healthy.

BURNT BONES FOR THE PEAR TREE.—We can bear testimony to the value of the bone-black of sugar refineries as a special manure for the pear tree. A peck mixed in the soil of a hole three feet in diameter, in which the tree is planted, gives great depth of verdure, and augments both the size and flavor of the fruit. It is probable that the new native phosphate now found in New-Jersey and Lake Champlain, will be eagerly sought after by pear cultivators as being the food of pears—*par excellence*.

NOTES FROM LAKE ONTARIO.—Many persons in your city, or farther seaward, suppose the region of the great Lake Ontario, one, if not inhospitable in soil, very severe in its climate, because it verges toward Canada. But it is quite otherwise. Often, while Utica and Rochester, and even Albany, are under the incubus of intense cold, or severe frosts, the lake shore here is in the enjoyment of comparatively moderate weather. This spring has been cold, and vegetation is backward; but within a few days the weather has been delightfully tempered with warm sunshine, and genial spring showers.

Oswego is situated directly on the lake shore, divided by a rapid river. The city itself, slopes on each side to the river, and furnishes innumerable positions where the most picturesque sites for dwellings or gardens are found. Shade trees abound, the city ordinances requiring them to be placed along the streets, by the owners of the contiguous property. Horticulture receives much attention—and some of the private grounds here are celebrated for good taste in arrangement, and for the delicious fruits, and exquisite flowers they produce. The ladies of this city devote themselves with much zeal, to matters of rural embellishment, and many of them are largely in advance of the other sex in their devotion to pomology, and the beauties of the floral kingdom. The soil and climate are admirably adapted for most kinds of delicious fruits, especially pears, plums, cherries, and peaches. Oswego is the paradise of roses. Nearly every variety is cultivated here. In no place, Philadelphia excepted, have I ever seen such gorgeous and attractive horticultural exhibitions. It may gratify you to know that the entire fruit crop in this region promises a rich har-

vest, the trees now beginning to show their blossoms in profusion.

A lady friend, who is eminent here for her good taste, and varied knowledge, on the subject of horticulture, has two favorite pear trees in her garden, which yielded delicious fruit last year, which have no perceptible bark for two or three feet from the ground—nothing but the naked wood presenting itself to the eye or the knife. Can you inform her what gives vitality to the tree, or how the sap circulates? [See Lindley's Horticulture. Ed.]

How can a hard-pan hill, which slides badly in wet weather, be covered with verdure? A friend has a noble stone residence on the high bluff of the lake, and the bank slides and makes an unsightly and rough aspect in front of his elegant mansion? Is there anything that will vegetate there, and keep the surface fresh, and from sliding? [Plant it thickly with young Buckthorns. Ed.] W. A. Oswego, May 14.

CRACKED PEARS.—On the premises of Mr. S. WILHELM in Easton, Pa., I saw an old pear tree; it was the Early Madeleine, the first branches of which were about 20 feet or more from the ground, and at a distance of about 15 feet from this tree, stood a young White Doyenne, about 9 or 10 years old, full of cracked fruit. A scion from this tree was set on a small branch of the old pear tree, being on the north side and perfectly shaded by the branches and foliage immediately above it.

This scion, which had grown there four or five years, was laden with the most perfect fruit, which ripened about six weeks later than that of the young tree, wherefrom the scion was taken. B. Nazareth, Pa.

THE LAST WINTER.—The long cold, worst winter that "the oldest inhabitant" ever knew has at last passed away, and spring, smiling and gay, with warm sunshines, genial showers, the rich song of birds, has come to gladden the hearts of all animate creation.

"Winter is passed and gone." It was a long winter and a cold one. November, often noted for its fine sunny days, was cold and frosty. Winter early threw her snowy mantle over the earth. December came with greater strength of cold, and January was the perfection of frostiness. For many successive nights the mercury

shrank below zero, nor did midday tend to draw it far from its hiding place. "The thaw," considered so necessary an accompaniment of the month, came, but the chilly north wind soon blighted its noblest efforts. February too, the shortest month of all the year, but lengthened now, that timid damsels might have time to choose before they wooed, was more renowned for its length, from its even, unmitigated coldness. The lowest the mercury fell with us was 10° below zero, while in common winters from 17° to 20° below is nothing new, at least for a few mornings.

Fruit trees and fruit buds have suffered but slightly from the effects of the winter. The cherry is in full and vigorous bloom. The peach, plum, pear, and apple promise well.

Delicate wooded plants come out fair, with less injury than usual. May it not, from the results of last winter, be fairly inferred, that a fluctuating temperature is more fatal to plants than an even one, though it be long continued cold. W. BACON. Richmond, Mass., May, 1852.

DR. VALK'S NATIVE GRAPE.—A reference to page 444 of the Horticulturist for October last, will remind your readers that I had something to say about the grape. My remarks amounted to this—that I had raised in 1845, several seedlings, a cross between the *Black Hamburg* and the *Isabella*, and that at the time I wrote you, these had "borne the frosts of four winters." I sent you a bunch of the fruit, (it was not a good sample,) of which you remarked, "the bunch resembles that of the *Isabella*—the grapes being hung somewhat loosely upon it. But the berries are round, blacker than the *Isabella*, and totally distinct in flavor from our native grapes—resembling the dark colored foreign grapes." Your notice, as far as it went, was flattering, and soon brought me numerous applications for "vines or cuttings," but I had neither to dispose of at any price.

In the November number, page 516, Mr. CHORLTON, of Staten Island, informed you of the interest he felt in reading of my success, and remarked, that "too much praise cannot be given to that gentleman, (myself,) for his enterprising experiment, but it appears to me that he has gone the wrong way to work." By which Mr. CHORLTON meant to say, that I should

have fertilized with the pollen of the Hamburg, and not with that of the Isabella. The inference no one can mistake. My seedlings partaking so much more "the constitution and habit of the mother," are not as likely to prove vigorous and hardy as they would have been with the *Isabella* on the maternal side. "Physiological theory teaches" well, but "practical experience proves" her sometimes to be in the wrong. The question to be tested is—are the seedlings of my raising, and of which I gave you some account in September last, as hardy as the *Isabella* vine? Putting aside all physiological theory, I appeal to the past severe winter for an answer. This test, in addition to the four previous seasons of cold, has tried my vines to my entire satisfaction, and it has demonstrated that their constitution is "as hardy, if not more so, than the *Isabella*." They need no eulogy from me beyond a declaration of the fact, that they have not received the least injury from their entire exposure to an unusual degree of frost. Mr. CHORLTON may, by going the right way to work, far exceed my efforts in experimenting, and he may rest assured of my best wishes for his success, but until something better is announced, I hold my seedlings to be superior to every other grape grown in the open air in any part of the U. States. In all the essential qualities of a first rate table grape, it is I venture to say without a rival, and, notwithstanding the misfortune of having gone to work the "wrong way," it will be yet some time before its equal will appear. This may be saying a great deal, and I may be thought partial to my new grape, but as I am no speculator in humbugs, and don't particularly care to cater a la Barnum to the follies and cheats of the prevailing mania in almost everything, I can leave my grape to the ordeal of its own merits, and the test of time. Nothing would have been easier than to have propagated a considerable stock for sale, but I have so far destroyed all the cuttings, and resisted very many exquisite hints, about giving or selling a single eye. If living and able to do so, I intend exhibiting the fruit in Boston this coming fall; then, its taste can be commented on, and a comparison instituted with the *Diana* and some others that I have read of. I shall thus "give proof of its excellence," though not so sure of "startling the country with the

intelligence of my having ten, twenty, or a hundred thousand plants" to sell. I aim at establishing the reputation of my grape on some better evidence than the usual form of horticultural charlatanism. When I have done so, (if I ever do,) I shall then take into consideration the benefits I may justly claim as the result of my effort to improve a valuable and delicious fruit. Respectfully yours, WM. W. VALK, M. D. Flushing, L. I., May 5, 1852.

[FOR THE HORTICULTURIST.]

The Gardener's Mission.

BY REV. JAMES RICHARDSON, JR.

Oh! tell us not, that Paradise
Bloomed in the distant past,
Ere Culture o'er the darkened world
Her radiant light had cast!

Oh! talk not of a Golden Age
In centuries dim and old,
Before creative Art begun
Her wonders to unfold!

No! Paradise is yet to come!
And in the future year,
With unimagined glories crowned,
The Golden Age appears.

The heaven-taught gardener's wondrous skill
Shall wreath the Earth with flowers,
While new and luscious fruits shall grow
Throughout her Eden bowers.

The world was but a wilderness,
'Till Art's celestial birth
Spread culture, like a robe of light,
O'er all the joyful Earth.

Wild grasses waved their scanty store
Over the untilled plain,
That now, with life and bounty filled,
Bend down their ripened grain.

The wild-wood briar waited long
For love, that should disclose,
By Art's sweet power, from mongre buds
The full and blushing rose.

Sour grew the rough and stunted crab
Within the thorn tree's shade,
Where now, amid the glancing leaves,
Through Culture's magic aid—

Swells forth the Apple's glowing cheek,
With juices rich and rare,
And hangs, with melting nectar filled,
The tempting golden Pear.

And, in the Future's brightening years,
Progression's law divine,
Unfolding still, with still new charms,
Shall make the landscape shine.

So that the day shall never dawn,
In which still fairer flowers
And fruits more luscious shall not come,
To bless this world of ours.

Then rosy Hope, with heaven-eyed Faith,
Shall cheer our labors wise,
Till this once rough dark wilderness
Shall change to Paradise.

Dorham, Mass., May, 1852.

YELLOW ROSES.—You will oblige one of your constant readers, by giving in the next number

of the Horticulturist, a description of the Persian yellow rose, and stating what are the points of difference between that and the yellow Harrison. A rose was sent me more than a year since, by the name of Persian yellow, that is vastly inferior both in shape and fullness to a yellow Harrison, that I have had for some years. Last fall I made the place where it was set, extremely rich with stable manure, and the bush has grown luxuriantly, but there is very little improvement in the blossom since last year. The color, so far as I see, is just the same with the yellow Harrison. I want to know whether there is but little difference between the two roses, or whether I have been cheated in my purchase. *M. A. Chapel Hill, N. C., May, '52.*

The Persian yellow rose is very distinct from the Harrison yellow. The former is a *cupped*, double rose, beautifully formed, and a third larger than the latter. The Harrison rose is semi-double and expands so as to be nearly flat when full blown. The Harrison has an upright, and Persian yellow a spreading, rather drooping habit. The Persian yellow is a very beautiful free flowering variety, of a pure deep chrome yellow. From your description of your plant, you have read the Harrison instead of the Persian yellow. *ED.*

ANALYSIS OF THE STRAWBERRY.—In the last number of the Horticulturist, I see an analysis of the strawberry, by myself, in which there is an error of importance, the correction of which I wish you to publish. It is this. It reads Phosphate of Lime—where it should read Lime. The same error has been published in several papers, and an error even more material, has been made (in publishing my analysis of the sweet potatoe,) by some of the papers. They have Phosphate of Lime, of Magnesia, of Potash, where they should have only Lime, Magnesia, Potash. I suppose that in the first place I may have caused the error, in the manner in which I made out my statement of these analyses, by placing the words Lime, Magnesia, Potash, under the words Phosphate of Iron. They inferred that Phosphate of Lime, Magnesia and Potash was meant, and so substituted the word Phosphate. Respectfully. *BILLIUS KIETLAND. Poland, O. May 13, 1852.*

WHEAT AND CHESS.—There has been a con-

trovery as to the fact of wheat turning to cheat or chess, which as far as I am informed is yet undecided.

It has come under the observation of several farmers, that wheat that has been pastured late is more apt to have a larger proportion of cheat amongst it than that which has not been pastured. This circumstance has suggested the idea that, where the *main* stalk of wheat has been destroyed, that the *side shoots* produce a grain differing from the parent grain. In proof of this I would instance the cabbage: where the head has been removed, the sprouts from the stalks produce a seed, which will not again produce cabbage—but still retaining much of the nature of cabbage. I do not know whether the attention of those writers on the subject has been turned to this fact, but it appears to me to be a strong case in point. Very respectfully, *A SUBSCRIBER. Lexington, Ky., May 1, 1852.*

PEARS ON QUINCE STOCKS.—In a late discussion on fruits, which took place at the agricultural meeting at the State House in Boston, Col. WILDER made some interesting remarks on this subject which we reprint:

Much attention has been given of late years to the cultivation of the pear on the quince stock, and in relation to which I have been requested to give the results of my experience. As a general rule, no tree will succeed for any great length of time where it is grafted on any other than its own species. There are, however, exceptions to this rule, and among them, some varieties of the pear, which grow vigorously, bear abundantly, and which seem to be even better adapted to the quince, than to their own root.

An impression has extensively prevailed unfavorable to the cultivation of the pear on the quince. This has arisen principally from an improper selection of kinds, or from injudicious cultivation. There are, however, three considerations which are absolutely necessary to success, viz., a deep, rich soil,—the planting of the quince stock entirely below the surface of the ground,—and a systematic and scientific course of pruning, as the tree progresses in growth.

Objections to this species of cultivation have been made from the belief that the quince was a short-lived tree, and that the crop must necessarily be small from what are termed dwarf trees. Such, however, has not been my experience. On the contrary, I have pear trees on the quince root which are twenty-five years old, and which produce annually a barrel or more of fruit each, and for aught that I can see, they are destined to survive as long as any that I

poisons on the pear root. These may, and probably have in some instances, thrown out roots from the pear stock, but whether this be so, or not, instances are not rare where such trees have attained in France the age of more than a hundred years, and we know of a quince tree in Massachusetts which is 40 years old, and which has produced 10 bushels of fruit in a season.

The pear, when grown on the quince, should always be trained in the pyramidal form. These may be planted in much closer order than when grown as standards. We have known them to succeed well where grown at the distance of 6 feet apart in the rows and 12 feet between the rows. In this way Mr. Rivers, the great English cultivator, planted 2500 Louise Bonne de Jerseys and 1500 Glout Morecaus for the London market. We consider 12 feet apart, each way, a liberal distance. This would give 302 trees to the acre, and we are clearly of the opinion, that soil and selection of varieties being right, no crop whatever would be more profitable. Such a plantation, with proper care would yield, in the fifth year, from 75 to 100 bushels of fine fruit. As to profit, this will not appear as an exaggeration, when it is known that Glout Morecau pears, a variety which succeeds admirably on the quince, have sold during the winter readily at one to two dollars per dozen, in our market.

We name as varieties which succeed well on the quince the following, and to which might be added many more:

Louise Bonne de Jersey.
Vicar of Winkfield.
Duchess d'Angoulême.
Glout Morecau.
Passe Colmar.
Urbaniste.

Belle et Bonne.
Beurre d'Ajou.
Beurre Diel.
Easter Beurre.
Beurre d'Amaulis.

GLOVER'S MODELS OF FRUITS.—Mr. Townend Glover, of Fishkill Landing, N. Y., has lately exhibited, at the Horticultural Hall, in this city, a collection of his model fruits. These models, produced by a process of which Mr. Glover is the inventor, are exact representations. They are also imperishable—as much so as marble itself. They are, therefore, highly valuable in furnishing correct ideas of the various kinds of fruits, being in this respect much superior to drawings or paintings. The collection he has here exhibited, embraces about 1500 specimens, comprising the most esteemed varieties of apples, pears, plums, cherries, strawberries, gooseberries, &c. They have received the highest encomiums from the most distinguished connoisseurs in horticulture, and we are glad to learn that an extensive collection has been ordered by the Massachusetts Horticultural Society. No better means can be devised by such associations for promoting the objects they have in view. The New-York State Agricultural Society has procured a cabinet of fruit models, and also a cabinet comprising the most common of the insects injurious to fruits, of which Mr. Glover produces exact imitations showing them

in their various stages, together with parts of the fruit, wood, or foliage on which they are to be found. So perfectly accurate are these artificial insects, that the distinguished entomologist, Dr. Goadby, when looking at the collection at Albany, asked whether they were real insects, or imitations. The deception in regard to the fruit is so complete, that children have frequently brought them to their teeth before discovering their mistake. We are pleased that Mr. Glover's labors in this business are beginning to be appreciated, and trust that he will receive the reward which his ingenuity, and the benefits of his discovery, so justly merit.—*Boston Cultivator.*

CULTURE OF TOMATOES.—I wish to say a few words about growing tomatoes, which I think would be worth publishing, if it has not appeared before this from some other source. We hear people talk about planting tomatoes in sandy ground, that is not very rich, for the reason that they run all to vines and produce no fruit. Now my plan is to plant the seed in good rich ground, and allow them to grow until they have made *two, three, or four* shoots from the stalk—after which, prune all the side shoots that come out, and follow this plan all through the season, every three or four days, and let the vines grow the full length, never pinching off the ends. In this way I can raise earlier and better tomatoes than by any other plan, and also a great many more of them. It is necessary to stake the vines up to keep them off the ground, and they will then grow from seven to nine feet long, with large bunches of tomatoes at the ends of the vines. Some of my neighbors have tried this plan and pronounce it far superior to every other. J. W. CLUTE. *Schenectady, April 22, 1852.*

TO KEEP BUGS FROM VINES.—I have tried ashes, plaster, lime, road dust and tobacco juice, with some success, but a spoiled clam, the cleanings of a wool carding machine, or a lock of wool soaked in fresh oil, placed near the root of the vine, I never knew fail—these also promote the growth of the vine. The bugs are attracted by the smell of the vine, but do not like tainted fish. PHINEAS PRATT. *Deep River, Ct.*

DESTROYING MILDEW.—MARSHALL P. WILDER, in a communication to the Journal of Agriculture, speaking of mildew on grapes, greenhouse plants, and elsewhere, says, "We have for more than fifteen years used sulphur for this purpose, and in no instance has it failed to effect a speedy cure. We have known instances where mildew, in the space of a few days, would spread its sporules over a large rose-house, destroying nearly all the foliage of the plants, and this, by the use of sulphur spread on the walks and over the plants, was extirpated in a short period."

Answers to Correspondents.

GRAFTING.—*B. (Rushville, O.)* All the varieties of horse chestnut may either be grafted or budded on the Ohio Buckeye. The Spruce of your forests is not a very good stock for working other evergreens upon. The retail price of the Landscape Gardening is \$3.00, of the Cottage Residences \$2.00.

SUMMER TREATMENT OF GREEN-HOUSE PLANTS.—*A Lover of Flowers.* In order to get a fine bloom from your plants in winter, you should not allow them to run into rank growth in summer. Do not plunge the pots in the borders, but choose a half shaded spot on the north side of a hedge, paling fence, or low building; the ground firm, and lay three inches of hard coal ashes over it. On this place the pots with room enough for each plant on every side. If the plants are pinched for room, you may shift them into larger pots before hand. Prune the heads of all into good shape, except such plants as have already set their flower buds for next winter, as the Camellia. If the pots are half sunk in coal ashes, (keeping 2 inches of it under them,) it will keep them all the cooler. Water regularly every evening, and in the morning, when the weather is hot and dry. The roots will not run through in the coal ashes, as they do in the soil, and if you give the plants proper attention to watering, you will find they are in excellent flowering condition in autumn, not having exhausted themselves by creeping through the pots, and having their best roots broken at the lifting season. Before they go into the house in autumn, the roots should be examined—those that want fresh potting should have it, and the others must have the surface of the soil renewed. The greatest error that all novices make in cultivating green-house plants, is in putting them in improper soil. The best and safest compost for all plants, where you are your own gardener, is two-thirds leaf mould, (entirely decayed leaves, to be found in the woods,) and one-third fine sand. Anything will grow in this, and a great many things will not grow without it.

NAMES OF FRUITS.—*A New-York Subscriber.* Colmar d'Aremberg, and Beurre d'Aremberg, are two very distinct fruits. The serrated leaved Early York, is one of the finest early peach-

es, higher flavored than the other variety with glanded leaves.

BEDDING PLANTS.—*A. P. (Trenton, N. J.)* You make your beds too rich for the Scarlet Geraniums, and therefore they run to leaf. They want the full sunshine, and a light, deep soil, not rich. Hydrangeas make a splendid bed, and may be kept there all winter by covering them with tan, and then turning a box over the tan to keep it dry. The White Salvia patens is for sale by all the leading florists.

INSECTS ON THE VINE.—*Dr. Butz, (Nazareth, Pa.)* The gray insect you describe is the vine-hopper. Provide yourself with one of Brown's Patent Fumigators, (to be had at Brist's, Seedsman, Philadelphia,) and pass a stream of tobacco smoke under the foliage of every vine in your vineyard—afterwards filling the house with smoke, and shutting it up all night. If the day is damp, the application will be more effectual; two or three operations of this kind will rid you of this pest. The cause of the rot on the hardy vines is not fully known. It is possibly a fungus—the seeds of which float in the air. In a vineyard of an acre which we have, we have found that carefully picking out all the diseased berries, as fast as the rot makes its appearance, entirely puts a stop to it here, but it might not where it is very prevalent.

ROSE SLUGS.—*Eliza, (Brooklyn, N. Y.)* A decoction of tobacco, about the color of weak black tea, thrown on the under side of the leaves of your roses, will destroy the slugs. Repeat it twice, just at sunset, and you will get rid of them—otherwise they entirely devour the leaves, leaving only the skeleton.

Notices of Societies.

American Pomological Congress.

In compliance with a resolution passed by the American Pomological Congress, during its session at Cincinnati, in October, 1856, it becomes my duty publicly to announce that the next session will be held at the city of Philadelphia, on Monday, the 13th day of September, 1857. The Congress will assemble at 10 o'clock, A. M., in the Chinese Museum Building, South Ninth-street, below Chestnut.

The Pomological, Horticultural, and Agricultural Societies throughout the United States and Canada, are invited to send such number of delegates as they may deem expedient. And the delegates are requested to bring with them specimens of the Fruits of their respective districts.

Packages, and Boxes of Fruit for the Congress, may be directed to the care of THOMAS P. JAMES, Esq., No. 212 Market-street, Philadelphia, should the owners be unable to give their personal attendance.

The various State Fruit Committees enumerated in the subjoined list, will, on or before the day of meeting, transmit their several reports to A. J. DOWNING, Esq., New-

burgh, general Chairman of the whole. The Chairman of each State Committee is authorized, where vacancies occur, to fill up the number of his Committee to five members.

W. D. BRINKLE, M. D., President.
Philadelphia, May 1, 1852.

LIST OF STATE FRUIT COMMITTEES.

Massachusetts, Robert Manning, Salem.
Vermont, C. Goodrich, Burlington.
Maine, Henry Little, Bangor.
Connecticut, V. M. Dow, New-Haven.
New-York, B. Hodge, Buffalo.
A. Saul, Newburgh.
New-Jersey, Thomas Hancock, Burlington.
Pennsylvania, Thomas P. James, Philadelphia.
Ohio, A. McIntosh, Cleveland.
Prof. J. P. Kirtland, Cleveland.
Dr. John A. Warder, Cincinnati.
Dr. S. A. Barker, McConelsville.
Rev. C. Springer, Meadow Farm.
Kentucky, Lawrence Young, Louisville.
H. P. Byram, Louisville.
Masson Brown, Frankfort.
H. F. Duncan, Lexington.
P. Blanchard, Mayview.
Virginia, Yandley Taylor, London.
Delaware, Edward Tinsall, Jun., Wilmington.
South Carolina, J. G. Drayton, Charleston.
William Sumner, Pomaria.
Georgia, Dr. Camak, Athens.
Dr. Ward, Athens.
Johnson J. Harris, Milledgeville.
D. Green, Macon.
Richard Peters, Atlanta.
Louisiana, James Evans, New-Orleans.
Tennessee, L. P. Yandell.
Mississippi, M. W. Phillips, Edwards.
Missouri, Thomas Allen, St. Louis.
James Sigerson.
E. Abbot.
Indiana, James Blake, Indianapolis.
J. Bell, New-Albany.
— Scott, Madison.
Illinois, Dr. J. A. Kennicott, Northfield.
Prof. J. B. Turner, Jacksonville.
S. Francis.
Edison Harkness.
C. R. Overman.
Michigan, J. C. Holmes, Detroit.
W. H. Scott, Adrian.
A. T. Prouty, Kalamazoo.
Wisconsin, F. R. Phoenix, Delavan.
Iowa, Henry Avery, Burlington.
Canada West, James Dougal, Amherstburgh.
District of Columbia, Joshua Pierce, Washington.
New-Hampshire, J. Hill, Concord.

Pennsylvania Horticultural Society.

The stated meeting of this association was held in the Chinese Saloon, Philadelphia, on Tuesday evening, May 1st, 1852. E. W. Keyser, V. P., in the chair. The display was excellent. The tables through their entire length were loaded with beautiful plants, some fruits, and remarkably well grown forced vegetables. The collection of plants from Dr. Jas. Rush's green-houses, was truly fine, consisting of very large Orange Trees, Acacias, Azaleas, Fuchsias, Cinerarias, etc. The table from John Lambert's contained beautiful Pelargoniums, Roses, Cinerarias, and other plants. The collection from Caleb Cope's houses was handsome, and embraced a number of choice Pelargoniums, Fuchsias, Cacti, and a variety of others. From Robert Buist's were, as on former occasions, many new plants, and shown for the first time, of which were *Hibbertia Cunninghamii*, *Zieria trifoliata*, *Hoya Cunninghamii*, *Eutaxia pungens*, *Epacris Copelandii*, and *E. laevigata*—also, Azaleas, Spireas, Lichenalias, Ericas, a collection of Tulips, several seedling Lilacs and a seedling Horse chestnut. By Benjamin Gulliss were fine Roses, Pelargoniums, Cinerarias, fine Verbenas, etc. By Robert Cornelius' gardener, very beautiful Roses. By Gerhard Schmitz, seedling Tulips, choice specimens, well broken and of much merit. By J. J. Jennings, many choice Tulips. Wm. Hobson exhibited a new and un-

described Boraginaceous plant in flower, from California. The Bouquets came from C. Cope's grounds and Joseph S. Lovering's, and Baskets of indigenous flowers were shown by Thos. Meehan and Robert Kilvington.

The fruit exhibited was from C. Cope's forcing houses, and consisted of a dish of fine Hovey's Seedling Strawberries, another of Black Alicante grapes, a few ripe cherries, and a vine filled with Black Hamburg Grapes.

The exhibition of vegetables did much credit to the contributors. The collection of forced specimens from Thos. Meehan, gardener to Joseph S. Lovering, was a superb display, comprising some 40 to 50 heads of the finest Cauliflowers ever shown before the Society—three varieties of Cucumbers, two kinds of Lettuce, five of Radishes, string Beans, early York Cabbage, etc. William Holton exhibited very large Rhubarb of his Seedling and Victoria varieties. Henry Cooper and Samuel Cooper, superior Rhubarb, and James M. Page large and fine asparagus. On motion adjourned. THOS. P. JAMES, Rec. Secretary.

National Agricultural Convention.

Whereas the Massachusetts Board of Agriculture, at its meeting held in Boston, January 14, 1852, requested its President to enter into correspondence with the Presidents of State and other Agricultural Associations on the expediency of calling a NATIONAL AGRICULTURAL CONVENTION:—and whereas the Pennsylvania State Agricultural Society, at its meeting at Harrisburgh on the 20th of the same month; and the Maryland State Agricultural Society, at its meeting in Baltimore, on the 4th of February, adopted similar resolutions, and recommended the formation of a National Agricultural Society;—and whereas the New-York, Ohio and other State Societies, through their Presidents or by published Resolves, have expressed similar views in relation to the necessity of a closer bond of union between all such institutions throughout our country:

Therefore, the undersigned, believing from these indications that the time has arrived for a confederation of local Agricultural Societies in the United States, and in conformity with a Resolution of the Pennsylvania Society, authorizing the Presidents of the three first named Associations to designate time and place,—do hereby invite Delegations to meet in Convention in the city of Washington, on the 24th day of June next, at 10 o'clock, A. M.

The objects of this Convention are to organize a NATIONAL AGRICULTURAL SOCIETY, to which the various Agricultural Societies may be auxiliary; to consult together upon the general good, and to establish, by this Society, or such other means as the Convention may devise, a more cordial and widely extended intercourse between agriculturists in our own country and in other lands, to create additional facilities for the acquisition and diffusion of knowledge, by books, journals, seeds and other objects of interest to the American farmer and gardener; and in act on such other matters pertaining to the advancement of agriculture as the wisdom of the Convention may judge appropriate.

For these purposes the undersigned earnestly solicit delegations from the various State, or other organizations, for the promotion of agriculture in the several States and Territories; and where such organizations do not exist, delegations from such districts, consisting in all cases of such number of persons as may be deemed expedient to appoint.

As it has been considered desirable to name an early day for this Convention than was at first expected, this circular is issued before the concurrence of the several State Agricultural Societies could be obtained. Their respective Presidents are therefore requested to add their names to this call, and to give immediate publicity to the same through the papers and periodicals of the day.

A large and general attendance is confidently anticipated. Societies will please transmit at an early date a list of the delegates they have appointed, to DANIEL LEE, M. D., Agricultural Department, Patent Office, Washington.

The above call is signed by Marshall P. Wilder, Pres. Mass. Board of Agr.—Frederick Watts, Pres. Penn. S. Ag. Soc.—Chas. B. Calvert, Md. do.—Henry Wager, N. Y. do.—Thomas Stocks, South. Cen. Ag. Soc.—Arthur Watts, Ohio S. B. of Ag.—James Tallmadge, Am. In., N. Y.—John C. Gray, Mass. Soc. Prom. Ag.—Joseph A. Wright, Ind. S. Ag. Soc.—Geo. A. Nesmith, N. H. do.—Frederick Holbrook, Vt. do.—Josiah Chapin, R. I. Soc. for the Encouragement of Domestic Industry.

Genesee Valley Hort. Society, Rochester.

This Society held its first exhibition on the 11th of May. It consisted principally of plants from green-houses and nurseries, the season being too backward for many other productions. Hyacinths of unusual size and beauty were shown, showing that culture is only necessary to perfect this early and beautiful flower.

ELLWANGER & BARRY exhibited fine specimens of *Rhododendron Catawbiense*, *Cinerarias*, (including some fine seedlings,) *Azuleas*, *Trepedium tricolorum grandiflorum*, six varieties *Crown Imperials*, thirty varieties *Hyacinths*, &c. &c.

CHARLES A. RYAN, Rochester and Charlotte Plankroad Nurseries, exhibited large specimens of *Spiraea prunifolia flore pleno*, *Petunia Prince of Wales*, &c. Extra fine *Roses*, *La Reine*, *Madam Bosanquet*, *Pactolus*, *Grandiflora*, *Hermosa*, &c. *Verbenas*, *Reine d'Jour*, *Defiance*, *Anacron*, &c. *Cinerarias*, *Beauty of Newington*, *Cerulea perfecta*, &c., and a large collection of *Hyacinths*, *Narcissus*, and *Crown Imperials*.

His *Spiraea prunifolia* was in beautiful flower, and is perfectly hardy in our climate—and his *Petunias* were very large in blossom, and perfect.

Verbenas he had of different sorts, growing in rude boxes, and their brilliant colors were well blended.

JOHN DONNELAN, of Hamford's Landing, exhibited the finest *Petunias*—the largest and most splendid flowers ever shown here of that kind. Large *White*, *Bianca*, *Baron Prevost*, *Enchantress*; as also 10 varieties of *Verbenas*, with *Roses*, *Pelargoniums* and *Carolinians*, besides two beautiful hand bouquets, of choice flowers, made up by Mrs. Robert Donnelan.

A. FROST & Co., exhibited fine specimens of *Japouica Cryphoneria*, and standard *Roses*.

JOHN DONNELAN exhibited well grown *Palestine Lettuce*, *Rose* and *Yellow Turnip Radishes*, and a new variety lately from China, besides *Giant Rhubarb*, tender and long, and *Asparagus*.

C. F. CROSSMAN exhibited *Victoria Rhubarb*, *Asparagus*, Early short and long *Green Cucumbers*, and *Cabbage Head Lettuce*.

Mr. C. F. VAN DOORN, (artist,) exhibited a collection of fruits painted in oil, giving faithful pictures of the *Northern Spy*, *Red Canada*, and *Baldwin Apples*. They were much admired.

Specimens in perfect keeping, were shown of the *Northern Spy Apple*, by J. H. WATTS, which vied strongly in fragrance with the flowers in the Hall.

Exhibitions are to be held frequently, and that for *Roses* takes place 19th June.

Under the auspices of the recently elected President, Mr. P. BARRY, the Society will prove an important auxiliary in increasing the interest already taken in the production of *Flowers and Fruits*. J. H. WATTS. Rochester, May 13, 1852.

The officers of this Society for the present year are as follows. P. Parry, of Rochester, President. Matthew G. Warner, of Rochester, John J. Thomas, of Macedon, Henry P. Norton, of Brockport, R. G. Pardee, of Palmyra, and John Donnelan, of Greece, Vice-Presidents. Leander Wetherell of Rochester, Corresponding Secretary. Joseph A. Enstman, of Rochester, Recording Secretary. James H. Watts, of Rochester, Treasurer.

Hartford County Hort. Society.

The annual meeting of the Hartford County Horticultural Society, was held on the 3d inst, and the following officers were chosen for the ensuing year, Alfred Smith Esq., the President, declining a re-election:

President—Wm. W. Turner.

Vice-Presidents—Henry Mygatt, John S. Butler, M. D.

Rec. Secretary—Gordon W. Russell.

Cor. Secretary—Thomas R. Dutton.

Treasurer—Erastus Smith.

Auditor—H. L. Bidwell.

Standing Committee—W. W. Turner, Dr. H. A. Grant, P. D. Sullivan, Joseph Winship, George Beach, Jr., Dr. J. S. Comstock, Dr. Gordon W. Russell, J. H. Goodwin, H. W. Terry, E. A. Whitney, H. L. Bidwell, Charles L. Porter, Henry Affleck, Wm. G. Comstock, Francis Gillette, N. W. Stanley, Daniel S. Dewey.

It was voted to continue the weekly exhibitions on Sa-

turday, which have been very well attended, and arrangements are in contemplation for a show of green house plants in May, and for a large exhibition of fruits and flowers in September.

New-York Horticultural Society.

Semi-annual exhibition, to be held at Metropolitan Hall, Broadway, on Wednesday, Thursday, and Friday, June 9th, 10th, and 11th, 1852.

Regulations.—The exhibition will open to the public at 1 o'clock, P. M. All articles for competition must be brought in by half past 10. Those arriving after this hour, will be received for exhibition only.

Competitors must hand a list of their articles to the Recording Secretary. Where this rule is not complied with, premiums will be withheld. Articles should in all cases, if possible, be properly named.

Articles which are entered for competition *in mass* will not be allowed to compete *separately* at the same exhibition; neither will the same article be allowed to compete in more than one class.

No article will be allowed to be removed from the room before the close of the exhibition, without the permission of the Committee.

Where premiums are offered for named varieties, the varieties must be dissimilar.

Seedling Plants must be the growth of the person presenting them, and should, if possible, be exhibited on their original stocks. No Seedling can be put in competition a second time for the Seedling prize.

All plants must have been in possession of the exhibitor at least one month.

The exhibitor's name will not be allowed on any article until after the Judges have rendered their decision.

The Committee will remove all ordinary specimens from the table.

All articles not removed by 12 o'clock of the day after the exhibition, will be considered at the disposal of the Committee.

Dishes and Glasses will be furnished by the Society where required.

The Medals of the Society will probably be ready in June, and will be given instead of money premiums of equivalent value, when desired.

It will greatly promote the objects of the Society, if the Fruits, Flowers and Vegetables are accompanied by brief observations on the peculiar mode of cultivation, together with any other remarks of utility.

Montreal Horticultural Society.

President—Hugh Allen, Esq.

Vice-Presidents—Hon. Justice Day, Hon. Justice McCord, Hon. A. N. Morin, M. P. P., Rev. Mr. Villeneuve.

Treasurer—John Frothingham.

Secretary—William Brown, of Cote de Niage Nurseries, Montreal.

Directors—Rt. Rev. Dr. Fulford, Mr. Sheriff Boston, S. T. Lyman, J. J. Day, Jno. Torrance, E. Muir, Jas. Ferrer, Jr., Geo. Shepherd, Richard Spriggings, J. E. Gault, Charles Hugal, James Cooper, Geo. Garth.

Rome Horticultural Society.

The following are the officers of the Rome Horticultural Society, recently elected:

President—Alval Mudge.

Vice-President—Eloin Comstock.

Secretary—C. P. Grosvenor.

Treasurer—J. A. Dudley.

Trustees—J. Stryker, Hervey Brayton, Jay Hathaway, Benjamin Leonard, Edward Huntington.

Horticultural Society of Pittsburgh.

The following gentleman are elected officers of this Society for the ensuing year: John Chislett, President; John Murdoch, Jr., Vice-President; A. Hershberger, Treasurer; Henry Woods, Secretary; A. Campbell, J. B. McQuewan, James Windkop, John Lowen, C. L. Goehring, Chas. Lockhart, T. J. Bingham, James Murdoch, James McKain, W. H. Williams, W. P. Marshall, and S. N. Wickersham, Executive Committee.



Kiosques or Summer Houses.

THE Horticulturist and

JOURNAL OF RURAL ART AND RURAL TASTE.

How to Popularize the Taste for Planting.

NOW to popularize that taste for rural beauty, which gives to every beloved home in the country its greatest outward charm, and to the country itself its highest attraction, is a question which must often occur to many of our readers. A traveller never journeys through England without lavishing all the epithets of admiration on the rural beauty of that gardenesque country; and his praises are as justly due to the way-side cottages of the humble laborers, (whose pecuniary condition of life is far below that of our numerous small house-holders,) as to the great palaces and villas. Perhaps the loveliest and most fascinating of the "cottage homes," of which Mrs. HEMANS has so touchingly sung, are the clergymen's dwellings in that country; dwellings for the most part, of very moderate size, and no greater cost than are common in all the most thriving and populous parts of the Union—but which, owing to the love of horticulture, and the taste for something above the merely useful, which characterises their owners, as a class, are, for the most part, radiant with the bloom and embellishment of the loveliest flowers and shrubs.

The contrast with the comparatively naked and neglected country dwellings that are the average rural tenements of our country at large, is very striking. Undoubtedly, this is, in part, owing to the fact that it takes a longer time, as LORD BACON said a century ago, "to garden finely than to build stately." But the newness of our civilization is not sufficient apology. If so, we should be spared the exhibition of gay carpets, fine mirrors and furniture in the "front parlor," of many a mechanic's, working-man's and farmer's comfortable dwelling, where the "bare and bald" have pretty nearly supreme control in the "front yard."

What we lack, perhaps, more than all, is, not the capacity to perceive and enjoy the beauty of ornamental trees and shrubs—the rural embellishment alike of the cottage and the villa, but we are deficient in the knowledge, and the opportunity of knowing how beautiful human habitations are made by a little taste, time, and means, expended in this way.

Abroad, it is clearly seen, that the taste has descended from the palace of the noble, and the public parks and gardens of the nation, to the hut of the simple peasant; but here, while our institutions have wisely prevented the perpetuation of accumulated estates, that would speedily find their expression in all the luxury of rural taste, we have not yet risen to that general diffusion of culture and competence which may one day give to the many, what in the old world belongs mainly to the favored few. In some localities, where that point has in some measure been arrived at already, the result that we anticipate, has in a good degree, already been attained. And there are, probably, more pretty rural homes within ten miles of Boston, owned by those who live in them, and have made them, than ever sprung up in so short a space of time, in any part of the world. The taste once formed there, it has become contagious, and is diffusing itself among all conditions of men, and gradually elevating and making beautiful, the whole neighborhood of that populous city.

In the country at large, however, even now, there cannot be said to be anything like a general taste for gardening, or for embellishing the houses of the people. We are too much occupied with *making a great deal*, to have reached that point when a man or a people thinks it wiser to understand how to enjoy a little well, than to exhaust both mind and body in getting an indefinite *more*. And there are also many who would gladly do something to give a sentiment to their houses, but are ignorant both of the materials and the way to set about it. Accordingly, they plant *odorous* Ailanthuses and filthy poplars, to the neglect of graceful elms and salubrious maples.

The influence of commercial gardens on the neighborhood where they are situated, is one of the best proofs of the growth of taste—that our people have no obtuseness of faculty, as to what is beautiful, but only lack information and example to embellish with the heartiest good will. Take Rochester, N. Y., for instance—which, at the present moment, has perhaps the largest and most active nurseries in the Union. We are confident that the aggregate planting of fruits and ornamental trees, within fifty miles of Rochester, during the last ten years, has been twice as much as has taken place, in the same time, in any three of the southern states. Philadelphia has long been famous for her exotic gardens, and now even the little yard plats of the city dwellings, are filled with roses, jasmines, *Lagestræmias*, and the like. Such facts as these plainly prove to us, that only give our people a knowledge of the beauty of fine trees and plants, and the method of cultivating them, and there is no sluggishness or inaptitude on the subject in the public mind.

In looking about for the readiest method of diffusing a knowledge of beautiful trees and plants, and thereby bettering our homes and our country, several means suggest themselves, which are worthy of attention.

The first of these is, by *what private individuals may do*.

There is scarcely a single fine private garden in the country, which does not possess plants that are perhaps more or less coveted—or would at least be greatly prized by neighbors who do not possess, and perhaps cannot easily procure them. Many owners of such places, cheerfully give away to their neighbors, any spare plants that they may possess; but the majority decline, for the most part, to give away plants at all,

because the indiscriminate practice subjects them to numerous and troublesome demands upon both the time and generosity of even the most liberally disposed. But every gentleman who employs a gardener, could well afford to allow that gardener to spend a couple of days in a season, in propagating some one or two really valuable trees, shrubs, or plants, that would be a decided acquisition to the gardens of his neighborhood. One or two specimens of such tree or plant, thus raised in abundance, might be distributed freely during the planting season, or during a given week of the same, to all who would engage to plant and take care of the same in their own grounds; and thus this tree or plant would soon become widely distributed about the whole adjacent country. Another season, still another desirable tree or plant might be taken in hand, and when ready for home planting, might be scattered broadcast among those who desire to possess it, and so the labor of love might go on as convenience dictated, till the greater part of the gardens, however small, within a considerable circumference, would contain at least several of the most valuable, useful, and ornamental trees and shrubs for the climate.

The second means is, by *what the nurserymen may do*.

We are very well aware that the first thought which will cross the minds of a selfish and narrow minded nurseryman, (if any such read the foregoing paragraph,) is that such a course of gratuitous distribution of good plants, on the part of private persons, will speedily ruin his business. But he was never more greatly mistaken, as both observation and reason will convince him. Who are the nurseryman's best customers? That class of men who have long owned a garden, whether it be half a rood or many acres, who have never planted trees—or, if any, have but those not worth planting? Not at all. His best customers are those who have formed a taste for trees by planting them, and who, having got a taste for improving, are seldom idle in the matter, and keep pretty regular accounts with the dealers in trees. If you cannot get a person who thinks he has but little time or taste for improving his place to buy trees, and he will accept a plant, or a fruit tree, or a shade tree, now and then, from a neighbor whom he knows to be "curious in such things"—by all means, we say to the nurseryman, encourage him to plant at any rate and all rates.

If that man's tree turns out to his satisfaction, he is an *amateur*, one only beginning to pick the shell, to be sure—but an amateur full fledged by-and-bye. If he once gets a taste for gardening downright—if the flavor of his own Rarities touch his palate but once, as something quite different from what he has always, like a contented, ignorant donkey, bought in the market—if his Malmaison rose, radiant with the sentiment of the best of French women, and the loveliness of intrinsic bud-beauty once touches his hitherto dull eyes, so that the scales of his blindness to the fact that one rose "differs from another," fall off forever—then we say thereafter, he is one of the nurseryman's best customers. Begging is both too slow and too dependent a position for him, and his garden soon fills up by ransacking the nurserymen's catalogues, and it is more likely to be swamped by the myriad of things which he would think very much alike, (if he had not bought them by different appellations,) than by any empty spaces waiting for the liberality of more enterprising cultivators.

And thus, if the nurseryman can satisfy himself with our reasoning that he ought not object to the amateur's becoming a gratuitous distributor of certain plants, we would persuade him for much the same reason, to follow the example himself. No person can propagate a tree or plant with so little cost, and so much ease, as one whose business it is to do so. And we may add, no one is more likely to know the really desirable varieties of trees or plants, than he is. No one so well knows as himself, that the newest things—most zealously sought after at high prices—are by no means those which will give the most permanent satisfaction *in a family garden*. And accordingly, it is almost always the older and well-tried standard trees and plants—those that the nurseryman can best afford to spare, those that he can grow most cheaply,—that he would best serve the diffusion of popular taste by distributing gratis. We think it would be best for all parties if the variety were very limited—and we doubt whether the distribution of *two* valuable hardy trees or climbers for five years, or till they became so common all over the surroundings as to make a distinct feature of embellishment, would not be more serviceable than disseminating a larger number of species. It may appear to some of our commercial readers, an odd recommendation to urge them to give away precisely that which it is their business to sell—but we are not talking at random, when we say most confidently, that such a course, steadily pursued by amateurs and nurserymen throughout the country, for ten years, would increase the taste for planting, and the demand for trees, five hundred fold.

The third means is by *what the Horticultural Societies* may do.

We believe there are now about forty Horticultural Societies in North America. Hitherto they have contented themselves, year after year, with giving pretty much the same old schedule of premiums for the best cherries, cabbages, and carnations, all over the country—till the stimulus begins to wear out—somewhat like the effects of opium or tobacco, on confirmed *habitues*. Let them adopt our scheme of popularising the taste for horticulture, by giving premiums of certain select small assortments of *standard* fruit trees, ornamental trees, shrubs, and vines, (purchased by the society of the nurserymen,) to the cultivators of such small gardens—suburban door-yards—or cottage enclosures, within a distance of ten miles round, as the inspecting committee shall decide to be best worthy, by their air of neatness, order and attention, of such premiums. In this way, the valuable plants will fall into the right hands; the vender of trees and plants will be directly the gainer, and the stimulus given to cottage gardens, and the spread of the popular taste, will be immediate and decided.

“Tall oaks from little acorns grow”—is a remarkably trite aphorism, but one, the truth of which no one who knows the aptitude of our people, or our intrinsic love of refinement and elegance, will under-rate or gain-say. If, by such simple means as we have here pointed out, our great farm on this side of the Atlantic, with the water privilege of both oceans, could be made to wear a little less the air of Canada-thistle-dom, and show a little more sign of blossoming like the rose, we should look upon it as a step so much nearer the millennium. In Saxony, the traveller beholds with no less surprise and delight, on the road between Wiessenfels and Halle, quantities of the most beautiful and rare shrubs and flowers, growing along the foot-paths, and by the sides

of the hedges which line the public promenades. The custom prevails there, among private individuals who have beautiful gardens, of annually planting some of their surplus *materiel* along these public promenades, for the enjoyment of those who have no gardens. And the custom is met in the same beautiful spirit by the people at large; for in the main, those embellishments that turn the highway into pleasure grounds, are respected, and grow and bloom as if within the enclosures.

Does not this argue a civilization among these "down-trodden nations" of Central Europe, that would not be unwelcome in this, our land of equal rights and free schools?

FIRE BLIGHT IN PEAR TREES

BY A. H. ERNST, CINCINNATI.

A. J. DOWNING, Esq.—Dear Sir: Pardon me for again touching a subject on which there has been so much speculation, without really advancing new facts, or shedding additional light to aid in removing the mist in which it seems enveloped.

I am led to the subject at this time to correct an error into which Prof. Turner of Ill., has fallen, in his article in your last number, (June.) I do not mean to review or criticise the consistency of his writings on this subject, but leave that for him to do at his leisure. I shall confine myself to his last mistake, in supposing that he had discovered a *new insect*, which he thinks is the cause of the mischief. He seems truly alarmed at the discovery and the prospect before him. I do not wonder that he is, for if his suspicions were well founded, it would indeed present a hapless despair, which he might well denominate the "*Pear Devil*." Well, for one of a partial and fanciful turn of mind this is certainly a subject on which to display its powers of imagination. He seems really in an unhappy state of mind, and one might almost infer that he is a believer in total depravity, and the idea that all animate and inanimate matter is but one mass of "living atoms," preying on each other's miseries; the only remedy for which is to purge or poison them to death. I hope on a little further acquaintance with the new (to him) form of blight, he will not find it so bad; and that there is still much to comfort and reward him for his labor.

Let us then come to matter of fact, and see how that stands. That he discovered the *existence of insects new to him*, and described them as he saw them, I presume no one would have required the confirmatory statement of a witness. But, that they have escaped the observation of others, or that they are the cause of the blight, is quite a different matter. If Prof. T. will turn to "*Harris' Treatise on Insects*," under the head of "Bark-lice," he will find a full description of the scale insect which he found on the branches of his trees. They are of very common occurrence among young fruit trees, especially in the nursery, and yet this is not the place we find the blight, of which we are speaking. I have seen young trees here, and at the north, where blight is but little known, literally covered with them, and though injurious to the growth and health of the plant, I have never seen the evidence of their connection with blight. The little fellows which resemble the "sow bug," which he saw "running about between the fibres of the bark," were long since introduced to the members of our Hort. Society, in their researches, in common with others which are usually found about the vitiated parts of blight. I do not

understand if Prof. T. means to convey the idea that all the insects he saw in connection with the blight, are the emanations of the eggs under the scales on the branches of the trees. I wish he had been less ambiguous about it.

I have had occasion to deplore the destruction of my trees, giving me much reason for close and critical observation, to detect, if possible, the cause, and a remedy for its destructive effects. I have not been idle in improving the opportunities thus afforded. A part of these researches the public are already in possession of through your Journal, vol. 2, p. 328 and 436, and others. I have seen no reason for abandoning the views there presented, but subsequent observations have confirmed their soundness. It is not my purpose to re-iterate them here; those who feel an interest in them can refer to them; nor do I hope to add much that is new.

It is of little consequence to the public, or ourselves, whether there is one or twenty sorts of blight, so long as we are grovelling in the dark about the first principles of its origin. My experience has entirely removed from my mind the idea that the blight is caused by insects, and equally satisfied my judgment of its real cause. This I do not hesitate to say, is altogether external—originating with the rapid changes of heat and cold, stimulating and suddenly checking the active motions of vegetation; and that insects have no more to do in producing it, than they have in causing *bilious fever* in the human system, though death may ensue, and insects, in either case, be attracted by the disease, and the abnormal condition thus produced.

I take it there is a strong analogy between vegetable and animal life and existence. That neither the one or the other can be transported from clime to clime, and subjected to unused fare, without endangering health; or can a system of crossing, having in view a different object than that of hardiness and long life, be pursued without the strong probability of sacrificing the one at the expense of the other. This is truly our position, whether applied to the pear, cherry, rose, or other exotic. We have contented ourselves with importing from other countries their enfeebled stocks. These will suffer just in proportion to their capabilities to resist the new influences under which they are brought. It matters not whether it be the frost of winter, or the scorching rays of a mid-summer's sun, or both combined; it is still blight, and conclusively proves the want of hardiness in the tree or plant, for our climate. It does not help us, that we import our seed, and from this produce some new and good sorts—they are as liable to be constitutionally defective, as if grown in Belgium or France, and then imported; it still remains the same enfeebled progeny.

A query may here arise, what shall we do? Shall we give them up in despair? By no means. We must begin at home; we must select our seed from trees, the structure of whose wood has given evidence of its power to resist this atmospheric influence. We have such—the *Seckel*, with many others of inferior fruit, but perfectly hardy trees, which my long and severe trial has proven. These we must fertilize with each other, and from their seed produce a new race of superior fruit, and hardiness of tree. Let us, then, not set down in hopeless despair, but go cheerfully to the work, enjoying a bright future as though it were present.

Hoping that what I have said in reference to the Professor's mistake, will not be construed as disrespectful, I remain very respectfully yours,

A. H. ERNST.

Spring-Garden, Cincinnati, June 12, 1852.

NOTES ON THE SEASONS IN MAINE.

BY WM. WILLIS, PORTLAND, ME.

MR. DOWNING—You have desired information respecting the effects of the late severe winter upon various orders of vegetation in different parts of the country, and as I think the suggestion a most valuable one, I send you a contribution touching our locality.

Portland is in north latitude 43°, 39', 52"; west longitude 70°, 13' 34", and 542 miles north-east from Washington. The last winter was one of the most severe we have had for many years; in *December* the mercury in Fahrenheit's thermometer fell on the 10th to 10° below zero, and averaged for the month from 10° below to 40 above zero, and on five different days it fell below zero, viz: on the first to 6° below—2d, 1°—10th, 10°—11th 6°—14th, 3°. The average temperature was nine degrees colder than in December, 1850, and the coldest month for the last 31 years, except that in 1831 and in 1835. In *January* the mercury fell below zero on six different days, viz: on the 16th, 10°—17th, 1°—18th, 4°—19th, 4°—20th, 16°—22d, 7°. The average temperature for the month was 17½°, being two degrees colder than the average for the last 37 years. In *February* the mercury fell below zero on three different days, viz: on the 19th, to 8°—20th, 7°—21st, 3°, the average temperature for the month being 23 degrees, by three observations a day, and two degrees warmer than the general average for the last 32 years; the range being from 8° below, to 42° above zero. The average for the three winter months was 19°, being three degrees colder than the general average for the last 32 years, and as cold as any winter since 1820. The thermometer was noted at sunrise, noon, and 8 P. M. During the last 37 years, the lowest points in the months of January, at which it has been registered at this place, are as follows, viz:

1821,.....	16 deg.	1833,.....	15 deg.	1843,.....	14 deg.
1823,.....	13	1835,.....	18	1851,.....	16
1827,.....	13	1839,.....	16	1853,.....	16
1830,.....	18	1844,.....	14		

For every one of the 37 years, the mercury in January fell below zero, varying from one to eighteen degrees, except the years 1825 and 1841.

Under the influence of this severe winter, which lingered far into the lap of spring, and from the sad forebodings expressed in various quarters, we had reason to expect a desolate account from our shrubs and fruit trees; but to our agreeable surprise, all our fruit trees, earlier than usual, began to exhibit signs of vitality, and are now covered with bloom. I have now on my grounds in full blossom, of Pears, the Bartlett, the good Louise of Jersey, the Vicar of Winkfield, the Melting Autumn, (*Fondante d'Automne*,) Duchess of Angouleme, Summer Dean, (Doyenne d'Ete,) &c.; of Cherries, the Flesh Colored Bigarreau, the Honey, and several of the hearts; of Plums, Smith's Orleans, Prince's Gage, Green Gage, and several others; they promise fine crops—never looked better, and are a few days earlier than the usual time for blossoming. Of a dozen budded French roses, imported last spring, including the Giant of Battles, Persian Yellow, and several mosses, I did not lose one, although they were not protected, except by a thick covering of coarse manure about their roots; a fine Isabella grape, and several Sweet Water's against a brick wall, with no other covering than this manure about the roots, bore the season remarkably well, and are now starting out strongly, and in good health, and with a prospect of the usual crop. I never lay down or cover my grape-vines, and have never experienced any inconvenience or loss from this neglect, the vines usually bearing well, being trained

to brick walls facing south-east and south-west, in the open air. My Osage Orange hedge does not appear to have suffered in the least, and is now putting out its buds. I planted the seeds of this hedge in the spring of 1849, and it is now in a flourishing condition; about six inches of the extremities is killed every winter, but the growth exceeds this every season, and it is now more than three feet high, thick, and well set. A plant of the *Weigela Rosea*, which I set out last spring, did not suffer in the least, although it was unprotected, except about the roots; it is now alive, and pushing out its foliage, even to the extremities. Nor did the peach tree suffer; I have one now full of blossoms, and promising well, and also an Apricot, although we make no calculation on either of these kinds of fruit, seldom having any ripen here; owing as much, perhaps, to our vicinity to the sea, and the prevalence of sea winds during the summer, as to our latitude. We are more than half the compass open to the sea, from the north-east to the south-west, and the sea winds come in from the south nearly every day of summer, except when it is varied by the still cooler breeze of the east. We do not here exclaim with the poet, "O, for a beaker full of the warm south, the true, the blissful hypocrène." Our warmest wind in spring and summer is the due west.

I have been surprised, and perhaps it will surprise you, to perceive, on a comparison of the seasons for a century and a quarter back, which I am able to do from the journals of our two earliest clergymen, SMITH and DEANE, the great regularity and uniformity which have attended the opening and blossoming season of the year. DEANE, our venerable pastor for fifty years, was the author of the first work on agriculture published in this country, styled "The New-England Farmer, or Georgical Dictionary," published in 1790; a new edition of which, with modern improvement, was issued a few years ago, under the supervision of Mr. FESSENDEN, editor of the "New-England Farmer," an able and popular periodical.

It is a common impression that the seasons have undergone some change within the past century—and that whether from improved cultivation, or change in climate, or other undefinable cause, they are earlier now, and more genial than formerly. This is a mistake; for by recurrence to our ancient records, we do not find that the pear, the plum, or the cherry put forth their beautiful blossoms any earlier, or any different among us now, than they did when our city was but a poor fishing village, straggling along on the margin of Casco river on one side, and skirted by the forest on the other. The progress of wealth and refinement have had no effect on them.

In 1726, April 27, the venerable SMITH remarks, "people generally planting; this month has been wet and uncomfortable; 'tis generally thought in these parts to be a backward spring. May 20, the peach and apple trees but now begin to blossom." "1751, May 8, our English cherries did but to-day begin to bloom. 17, they are now in all their gayety of bloom." "1756, May 11, our Heart cherry trees, pear and plums, are blossoming. 19, they are all in their bloom." "July 18, we have had the greatest abundance of cherries that ever we had, perhaps twenty or thirty bushels." "1759, May 16, the cherry trees are blooming." "1760, May 10, the Heart cherry trees begin to blossom, earlier than last year, and then earlier than usual." "1764, May 25, the cherry trees are in full bloom." "1765, May 14, the cherry blows." "1766, May 16, our cherry trees begin to blossom." "1767, May 22, the Heart cherries are in blow." "1768, May 13, cold still, and the spring unusually backward. 21, thermometer up to 76°; but P. M. sunk 20 degrees; the cherry and damson trees begin to blow." It is a little remarkable, that in 1849, on the same day, 70 years afterwards, the mercury in the morning stood at 76°, and fell before seven in the evening, to 46°, showing a remarkable coincidence. Such

changes are constantly occurring here, the effect, in part, of our sea winds. Again referring to our venerable Annalist, he says; "1770, May 5, English cherries begin to blow." "1771, May 6, the spring is thought to be very forward; May 20, the Heart cherries are all in blossom." Now note how little our feelings and resolutions are to be relied on in these matters; in 1768, he says the spring was unusually backward, and yet the cherry and damson trees began to blow May 21; while in 1771, he says the spring is thought to be very forward, and yet the heart cherries blossomed but one day sooner; and so in 1773, he says, "May 1, the spring is thought to be a month forwarder than usual," and adds, May 12, the Heart cherry and pear trees in blow, and the common cherry and plum trees just upon it. June 15, strawberries plenty." This is at least half a month earlier than the ordinary time for strawberries here at the present day. "1776, May 8, the ground has frozen for three nights back;" and yet he says in June, "hot summer; and in September, "a great product of Indian corn." Another of the seasons that grievously disappoint croakers, occurred in 1777. Mr. SMITH says, "May 15, it is agreed to be the coldest weather, and most backward spring that ever was. June 30, cold, very cold, nothing ever like it through the whole spring, and yet everything is flourishing, perhaps never more so." And to crown all, he adds, Sept. 2, "the earth is burdened with its fruits." What an encouragement is this to a cheerful trust in Providence, who doeth all things well; and what a stern rebuke to the everlasting spirit of fault-finding, which goes on from year to year, in the face of the most cheering facts and results, grumbling and fretting, and vexing itself, until it falls into an untimely grave, never bearing the blossoms and fruit buds of a cheerful and confiding trust in a Being that has assured us that seed time and harvest shall not fail. "I pity the man who can travel from Dan to Beersheba, and cry all is barren."

A few more extracts, that we may follow down the series of years, and confirm the position assumed, of the remarkable uniformity of the seasons. "1779, May 18, the cherries and plums begin to blow. June 23, at the best." "1785, May 19, the spring is backward, cold and wet; 30, a hot day, which causes the cherry and plum trees to begin to blossom." Now see the result of the backward spring. "July 31, everything is very flourishing, never a better prospect. August 20, happy season."

We have thus run through Mr. SMITH's diary of the seasons, dipping here and there, to give a taste of its quality, "*dulces est dissifere in loco*." Dr. DEANE's journal increases the evidence, from which we will add a few notices, although, as the lawyers say, the evidence is merely accumulative. "1798, May 19, pear and plum trees full of blossoms; 22, apple in full blossom." "1803, pear blossomed May 21, apple May 26." Another journal adds, "1810, May 14, pear and plum trees blossomed." 1816, May 21, pear trees, currants, and gooseberries are in blow."

Now, passing over the intermediate years, which flow on with a current little varying from the past, we come to the present time, for the purpose of exhibiting the comparison, and will put the facts in the form of a table, showing the period of blossoming of the trees and vines therein mentioned.

Year.	Strawberry.	Cherry.	Peach.	Plum.	Pear.
1848,	May 6	May 13	May 19	May 18	May 16
1849,	do 13	do 19	do 19	do 20	do 24
1851,	do 13	do 16	do 17	do 18	do 17
1852,	do 15	do 18	do 19	do 18	do 20

This year, the four days of May, sixth, seventh, eighth, and ninth, the weather was remarkably warm. The mercury rose on the 6th, to 77°—on the 7th, to 83°—8th, to 80—

and 9th, to 75°; it then fell off, and has ranged at a low temperature since, falling as low as 40 and not rising above 65.

These records, passing over a century and a quarter, show the regularity with which nature moves in her plans for the supply of the material wants of man, notwithstanding he is ever complaining of the manner in which she does her work for his benefit and delight. She goes on uniformly and calmly, in her beneficent labor, spreading her beautiful flowers where no mortal eye ever falls upon them, and then maturing the fruit which is to afford him nourishment and gratify his sense—not essentially impeded by what man chooses to call a backward spring, nor overflattered by a sunbeam or an occasional zephyr, so as to lose the great balance which keeps all things moving well. How few days separate the earliest from the latest period on which she puts on her gay and delightful apparel of flowers, the preceding record clearly reveals; still fewer is the difference between those in which she pours into our lap the ripened harvest. When the whether in spring continues cool, the secret roots and vessels of plants are gathering strength and resources to supply the exhausting processes by which the flowers, and fruits and seeds, are matured; while on the contrary, an early and unseasonable warmth calls upon them for an exhausting effort, before they are prepared to encounter it.

WM. WILLIS.

Portland, Me., May, 23, 1852.

PLAN FOR INDUSTRIAL UNIVERSITIES.

BY PROFESSOR TURNER, JACKSONVILLE, ILL.

THE leaven of the necessity for education among the industrial classes, begins to work, we are happy to perceive, in many parts of the country. Massachusetts is likely to be the first to set an Agricultural School on a comprehensive scale, in operation—but we see indications of marked interest in half a dozen other states. At a Farmers' Convention in Illinois, our correspondent Professor TURNER, of that State, submitted a plan for such an educational institution, which has since been published in pamphlet form. We think the importance of the subject one that will be sufficient apology for allowing the Professor to be heard by a large audience. It is not often that the weak points of an ordinary collegiate education, are so clearly exposed, and the necessity of working-men's universities so plainly demonstrated. Ed.

PLAN FOR THE STATE UNIVERSITY.—There should be connected with such an institution, in this state, a sufficient quantity of land, of variable soil and aspect, for all its needful annual experiments and processes in the great interests of agriculture and horticulture.

Buildings of appropriate size and construction for all its ordinary and special uses; a complete philosophical, chemical, anatomical, and industrial apparatus; a general cabinet, embracing everything that relates to, illustrates or facilitates any one of the industrial arts; especially all sorts of animals, birds, reptiles, insects, trees, shrubs and plants found in this state, and the adjacent states.

Instruction should be constantly given in the anatomy and physiology, the nature, instincts, and habits of all animals, insects, trees, and plants; their laws of propagation, primogeniture, growth and decay, disease and health, life and death; on the nature, composition, adaptation and regeneration of soils; on the nature, strength, durability, preservation, perfection, composition, cost, use and manufacture of all materials of art and

trade; on political, financial, domestic, and manual economy, (or the saving of labor of the hand,) in all industrial processes; on the true principles of national, constitutional, and civil law; and the true theory and art of governing and controlling, or directing the labor of men in the state, the family, shop and farm; on the laws of vicinage, of the laws of courtesy and comity between neighbors as such, and on the principles of health and disease in the human subject, so far, at least, as is needful for household safety; on the laws of trade and commerce, ethical, conventional and practical; on book-keeping and accounts; and, in short, in all those studies and sciences, of whatever sort, which tend to throw light upon any art or employment, which any student may desire to master; or upon any duty he may be called to perform; or which may tend to secure his moral, civil, social, and industrial perfection, as a man.

No species of knowledge should be excluded, practical or theoretical; unless, indeed, those specimens of "organized ignorance" found in the creed of party politicians and sectarian ecclesiastics, should be mistaken by some for a species of knowledge.

Whether a distinct classical department should be added, or not, would depend on expediency. It might be deemed best to leave that department to existing colleges, as their more appropriate work, and to form some practical and economical connection with them for that purpose: or it might be best to attach a classical department in due time, to the institution itself.

To facilitate the increase and practical application and diffusion of knowledge, the professors should conduct, each in his own department, a continued series of *annual experiments*.

For example, let twenty or more acres of each variety of grain, (each accurately measured,) be annually sown, with some practical variation on each acre, as regards the quality and preparation of the soil; the kind and quantity of seed; the time and mode of sowing or planting; the time, and modes, and processes of cultivation and harvesting, and an accurate account kept of all costs, labor, &c., and of the final results. Let analogous experiments be tried on all the varied products of the farm, the fruit-yard, the nursery, and the garden; on all modes of crossing, rearing, and fattening domestic animals, under various degrees of warmth and of light, with and without shelter; on green, dry, raw, ground, and cooked food, cold and warm; on the nature, causes, and cure, of their various diseases, both of those on the premises, and of those brought in from abroad, and advice given, and annual reports made on those and all similar topics. Let the professors of physiology and entomology be ever abroad at the proper seasons, with the needful apparatus for seeing all things visible and invisible, and scrutinizing the latent causes of all those blights, blasts, rots, rusts and mildews which so often destroy the choicest products of industry, and thereby impair the health, wealth, and comfort of millions of our fellow men. Let the professor of chemistry carefully analyze the various soils and products of the state, retain specimens, give instruction, and report on their various qualities, adaptations, and deficiencies.

Let similar experiments be made in all other interests of agriculture, and mechanic or chemical art, mining, merchandize, and transportation by water and by land, and daily practical and experimental instruction given to each student in attendance, in his own chosen sphere of research, or labor in life. Especially let the comparative merits of all labor-saving tools, instruments, machines, engines, and processes, be thoroughly and practically tested and explained, so that their benefits might be at once enjoyed, or the expense of their cost avoided by the unskilful and unwary.

It is believed by many intelligent men, that from one-third to one-half the annual pro-

ducts of this state are annually lost from ignorance on the above topics. And it can scarcely be doubted, that in a few years the entire cost of the whole Institution would be annually saved to the state, in the above interests alone, aside from all its other benefits, intellectual, moral, social and pecuniary.

The APPARATUS required for such a work is obvious. There should be grounds devoted to a botanical and common garden; to orchards and fruit-yards; to appropriate lawns and promenades, in which the beautiful art of landscape gardening could be appropriately applied and illustrated; to all varieties of pasture, meadow, and tillage needful for the successful prosecution of the needful annual experiments. And on these grounds should be collected and exhibited a sample of every variety of domestic animal, and of every tree, plant, and vegetable that can minister to the health, wealth, or taste and comfort of the people of the state; their nature, habits, merits, production, improvement, culture, diseases, and accidents, thoroughly scrutinized, tested, and made known to the students, and to the people of the state.

There should also be erected, a sufficient number of buildings and out-buildings for all the purposes above indicated, and a REPOSITORY, in which all the ordinary tools and implements of the institution should be kept; and models of all other useful implements and machines from time to time collected, and tested, as they are proffered to public use. At first it would be for the interest of inventors and venders, to make such deposits. But, should similar institutions be adopted in other states, the general government ought to create in each state a general patent office, attached to the Universities, similar to the existing deposits at Washington, thus rendering this department of mechanical art and skill more accessible to the great mass of the people of the Union.

I should have said, also, that a suitable industrial library should be at once procured, did not all the world know such a thing to be impossible, and that one of the first and most important duties of the professors of such institutions, will be to begin to create, at this late hour, a proper practical literature, and series of text books for the industrial classes.

As regards the PROFESSORS, they should, of course, not only be men of the most eminent practical ability in their several departments, but their connection with the institution should be rendered so fixed and stable, as to enable them to carry through such designs as they may form, or all the peculiar benefits of the system would be lost.

Instruction, by lectures and otherwise, should be given mostly in the colder months of the year, leaving the professors to prosecute their investigations, and the students their necessary labor, either at home or on the premises, during the warmer months.

The institution should be open to all classes of students above a fixed age, and for any length of time, whether three months or seven years, and each taught in those peculiar branches of art which he wishes to pursue, and to any extent, more or less. And all should pay their tuition and board bills, in whole or in part, either in money or necessary work on the premises—regard being had to the ability of each.

Among those who labor, medals and testimonials of merit should be given to those who perform their tasks with most promptitude, energy, care, and skill; and all who prove indolent or ungovernable, excluded at first from all part in labor, and speedily, if not thoroughly reformed, from the institution itself, and here again let the law of nature instead of the law of rakes and dandies be regarded, and the true impression ever made on the mind of all around, that WORK ALONE IS HONORABLE, and indolence certain disgrace if not ruin.

At some convenient season of the year, the commencement, or ANNUAL FAIR of the

University, should be holden through a succession of days. On this occasion the doors of the institution, with all its treasures of art and resources of knowledge, should be thrown open to all classes, and as many other objects of agricultural or mechanical skill, gathered from the whole state, as possible, and presented by the people for inspection and premium on the best of each kind; judgment being rendered, in all cases, by a committee wholly disconnected with the institution. On this occasion, all the professors, and as many of the pupils as are sufficiently advanced, should be constantly engaged in lecturing and explaining the divers objects and interests of their departments. In short, this occasion should be made the great annual GALA-DAY of the Institution, and of all the industrial classes, and all other classes in the state, for the exhibition of their products and their skill, and for the vigorous and powerful diffusion of practical knowledge in their ranks, and a more intense enthusiasm in its extension and pursuit.

As matters now are, the world has never adopted any efficient means for the application and diffusion of even the practical knowledge which does exist. True, we have fairly got the primer, the spelling book, and the newspaper abroad in the world, and we think that we have done wonders; and so, comparatively, we have. But if this is a wonder, there are still not only wonders, but, to most minds, inconceivable miracles, from new and unknown worlds of light, soon to break forth upon the industrial mind of the world.

Here, then, is a general, though very incomplete, outline of what such an institution should endeavor to become. Let the reader contemplate it as it will appear when generations have perfected it, in all its magnificence and glory; in its means of good to man, to *all men of all classes*: in its power to evolve and diffuse practical knowledge and skill, true taste, love of industry, and sound morality—not only through its apparatus, experiments, instructions, and annual lectures and reports, but through its thousands of graduates, in every pursuit in life, teaching and lecturing in all our towns and villages, and then let him seriously ask himself, is not such an object worthy of at least an effort, and worthy of a state which God himself, in the very act of creation, designed to be the first agricultural and commercial state on the face of the globe?

Who should set the world so glorious an example of educating their sons worthily of their heritage, their duty, and their destiny, if not the people of such a state? In our country we have no aristocracy, with the inalienable wealth of ages, and constant leisure and means to perform all manner of useful experiments for their own amusement; but we must create our nobility for this purpose, as we elect our rulers, from our own ranks, to aid and serve, not to domineer over and control us. And this done, we will not only beat England, and beat the world in yachts and locks and reapers, but in all else that contributes to the well being and true glory of man.

I maintain that, if every farmer's and mechanic's son in this state could now visit such an institution but for a single day in the year, it would do him more good in arousing and directing the dormant energies of mind, than all the cost incurred, and far more good than many a six months of professed study of things he never need and never wants to know.

As things now are, our best farmers and mechanics, by their own native force of mind, by the slow process of individual experience, come to know, at forty, what they might have been taught in six months at twenty, while a still greater number of the less fortunate or less gifted, stumble on through life, almost as ignorant of every true principle of their art as when they begun. A man of real skill is amazed at the slovenly ignorance and waste he everywhere discovers, on all parts of their premises; and still more to hear them boast of their ignorance of all "book farming," and maintain that "their children can do as well as they have done;" and it certainly would be a great pity if they could not.

The patrons of our University would be found in the former, not in the latter class. The man whose highest conception of earthly bliss is a log-hut, in an uninclosed yard, where pigs of two species are allowed equal rights, unless the four legged tribe chance to get the upper hand, will be found no patron of Industrial Universities. Why should he be? He knows it all already.

There is another class of untaught farmers who devote all their capital and hired labor to the culture, on a large scale, of some single product, which always pays well when so produced on a fresh soil, even in the most unskilful hands. Now, such men often increase rapidly in wealth, but it is not by their skill in agriculture, for they have none; their skill consists in the management of capital and labor, and, deprive them of these, and confine them to the varied culture of a small farm, and they would starve in five years, where a true farmer would amass a small fortune. This class are, however, generally, the fast friends of education, though many a looker on will cite them as instances of the uselessness of acquired skill in farming, whereas they should cite them only as a sample of the resistless power of capital even in comparatively unskilful hands.

Such institutions are the only possible remedy for a caste education, legislation, and literature. If any one class provide for their own liberal education, in the state, as they should do, while another class neglect this, it is as inevitable as the law of gravitation, that they should form a ruling caste or class by themselves, and wield their power more or less for their own exclusive interests and the interests of their friends.

If the industrial were the only educated class in the state, the caste power in their hands would be as much stronger than it now is, as their numbers are greater. But now industrial education has been wholly neglected, and the various industrial classes left still ignorant of matters of the greatest moment pertaining to their vital interests, while the professions have been studied till trifles and fooleries have been magnified into matters of immense importance, and tornadoes of windy words and barrels of innocent ink shed over them in vain.

This, too, is the inevitable result of trying to crowd all liberal, practical education into one narrow sphere of human life. It crowds their ranks with men totally unfit by nature for professional service. Many of these, under a more congenial culture, might have become, instead of the starving scavengers of a learned profession, the honored members of an industrial one. Their love of knowledge was indeed amiable and highly commendable; but the necessity which drove them from their natural sphere in life, in order to obtain it, is truly deplorable.

But such a system of general education as we now propose, would (in ways too numerous now to mention) tend to increase the respectability, power, numbers, and resources of the true professional class.

Nor are the advantages of the mental and moral discipline of the student to be overlooked; indeed, I should have set them down as most important of all, had I not been distinctly aware that such an opinion is a most deadly heresy; and I tremble at the thought of being arraigned before the tribunal of all the monks and ecclesiastics of the old world, and no small number of their progeny in the new.

It is deemed highly important that all in the professional classes should become writers and talkers; hence they are so incessantly drilled in all the forms of language, dead and living, though it has become quite doubtful whether, even in their case such a course is most beneficial, except in the single case of the professors of literature and theology, with whom these languages form the foundation of their professions and the indispensable instruments of their future art in life.

No inconsiderable share, however, of the mental discipline that is attributed to this peculiar course of duty, arises from daily intercourse, for years, with minds of the first order in their teachers and comrades, and would be produced under any other course, if the parties had remained harmoniously together. On the other hand, a classical teacher, who has no original, spontaneous power of thought, and knows nothing but Latin and Greek, however perfectly, is enough to stultify a whole generation of boys and make them all pedantic fools like himself. The idea of infusing mind, or creating, or even materially increasing it by the daily inculcation of unintelligible words—all this awful wringing to get blood out of a turnep—will, at any rate, never succeed except in the hands of the eminently wise and prudent, who have had long experience in the process; the plain, blunt sense of the unsophisticated will never realise east in the operation. There are, moreover, probably, few men who do not already talk more, in proportion to what they really know, than they ought to. This chronic diarrhoea of exhortation, which the social atmosphere of the age tends to engender, tends far less to public health than many suppose. The history of the Quakers shows that more sound sense, a purer morality, and a more elevated practical piety can exist, and does exist, entirely without it, than is commonly found with it.

At all events, we find as society becomes less conservative and pedantic, and more truly and practically enlightened, a growing tendency of all other classes, except the literary and clerical, to omit this supposed linguistic discipline, and apply themselves directly to the more immediate duties of their calling; and aside from some little inconvenience at first, in being outside of caste, that they do not succeed quite as well in advancing their own interests in life, and the true interests of society, there is no sufficient proof.

Indeed, I think the exclusive and extravagant claims set up for ancient lore, as a means of disciplining the reasoning powers, simply ridiculous when examined in the light of those ancient worthies who produced that literature, or the modern ones who have been most devoted to its pursuit, in this country and in Europe. If it produces infallible practical reasoners, we have a great many thousand infallible antagonistic truths, and ten thousand conflicting paths of right, interest, duty, and salvation. If any man will just be at the trouble to open his eyes and his ears, he can perceive at a glance, how much this evasive discipline really does, and has done, for the reasoning faculty of man, and how much for the power of sophistical cant, and stereotyped nonsense; so that if obvious facts, instead of verbose declamation, are to have any weight in the case, I am willing to join issue with the opposers of the proposed scheme, even on the bare ground of its superior adaptation to develop the mental powers of its pupils.

The most natural and effectual mental discipline possible for any man, arises from setting him to earnest and constant thought about the things he daily does, sees, and handles, and all their connected relations and interests. The final object to be attained, with the industrial class, is to make them *thinking laborers*, while of the professional class we should desire to make *laborious thinkers*: the production of goods to feed and adorn the body being the final end of one class of pursuits, and the production of thought to do the same for the mind, the end of the other. But neither mind nor body can feed on the of-fals of preceding generations. And this constantly recurring necessity of reproduction, leaves an equally honorable, though somewhat different career of labor and duty open to both; and, it is readily admitted, should and must vary their modes of education and preparation accordingly.

It may do for the man of books to plunge at once amid the catacombs of buried nations and languages, to soar away to Greece or Rome, or Nova-Zembla, Kamskatka, and the

fixed stars, before he knows how to plant his own beans, or harness his own horse, or can tell whether the functions of his own body are performed by a heart, stomach and lungs, or with a gizzard and gills.

But for the man of work thus to bolt away at once from himself and all his pursuits in after life, contravenes the plainest principles of nature and common sense. No wonder such educators have ever deemed the liberal culture of the industrial classes an impossibility, for they have never tried, nor even conceived of any other way of educating them, except that by which they are rendered totally unfit for their several callings in after life. How absurd would it seem to set a clergyman to plowing and studying the depredations of blights, insects, the growing of crops, &c., &c., in order to give him habits of thought and mental discipline for the pulpit; yet, this is not half as ridiculous, in reality, as the reverse absurdity of attempting to educate the man of work in unknown tongues, abstract problems and theories, and metaphysical figments and quibbles.

Some, doubtless, will regard the themes of such a course of education as too sensuous and gross to be at the basis of a pure and elevated mental culture. But the themes themselves cover all possible knowledge of all modes and phases of science, abstract, mixed, and practical. In short, the field embraces all that God has made, and all that human art has done, and if the created Universe of God, and the highest art of man, are too gross for our refined uses, it is a pity the "morning stars and the sons of God," did not find it out as soon as the blunder was made. But, in my opinion, these topics are of quite as much consequence to the well-being of man, and the healthful development of mind, as the concoction of the final nostrum in medicine, or the ultimate figment in theology and law, or conjectures about the galaxy or the Greek accent; unless, indeed, the pedantic professional trifles of one man in a thousand, are of more consequence than the daily vital interests of all the rest of mankind.

But can such an institution be created and endowed? Doubtless it can be done, and done at once, if the industrial classes so decide. The fund given to this state by the general government, expressly for this purpose, is amply sufficient, without a dollar from any other source; and it is a mean, if not an illegal perversion of this fund, to use it for any other purpose. It was given to the people, the whole people of this state—not for a class, a party, or sect, or conglomeration of sects; not for common schools, or family schools, or classical schools; but for "An University," or seminary of a high order, in which should, of course, be taught all those things which every class of citizens most desire to learn—their own duty and business for life. This, and this alone, is an University in the true, original sense of the term. And if an institution which teaches all that is needful only for the three professions of law, divinity, and medicine, is, therefore, an University, surely one which teaches all that is needful for all the varied professions of human life, is far more deserving of the name and the endowments of an University.

BIRDS, INSECTS, AND OTHER MATTERS.

BY J. C. H., SYRACUSE.

"No method has proved effectual, [against the Curculio,] but placing the trees in the midst of the pig and poultry yard—and, notwithstanding the numerous remedies that have been proposed in our pages since the commencement of this work, this proves the only one that has not failed oftener than it has succeeded."

"For our own part, we fully believe that it is the gradual decrease of small birds—

part from the destruction of the forests, but mainly from the absence of laws against the vagabond race of unfledged sportsmen, who shoot sparrows when they ought to be planting corn—that this inordinate increase of insects is to be attributed.” [From the *leader in Hort. for July, 1851.*]

MR. EDITOR—I select the two passages from our pomological scripture, for the purpose of showing the limited operation of the remedy applauded in the one, and of protesting against the injustice of the conclusions involved in the other.

It may do very well for the plum cultivator, who has ample room and verge enough, to set apart a portion of his grounds for an extensive pig-sty—who has the means to furnish it with tenants and to support them—whose taste and circumstances admit of the raising of pork and poultry—and whose plum planting *is yet to be begun*—to adopt the “only remedy that has not failed more frequently than it has succeeded,” against the operations of the curculio. But unfortunately for the success of this beneficent plan, it is of the most circumscribed applicability. The great mass of plum growers live in towns and villages, occupying lots ranging in extent from one-eighth to one whole acre, and whose trees, in the garden, or front yard, or wherever else on their limited premises they can find room to “tuck” them, are already grown—circumstances which render the recommendation of the union of plum orchards and piggeries more easily smiled at than carried out. Yet it is for this class of cultivators, above all others, that an universal remedy against the curculio is demanded. The retired citizen, passing the time pleasantly under the delusion that he has become an agriculturist by virtue of his “park” of a few acres, and the extensive cultivator for the stalls, from whence the citizen retired, can afford to protect their fruit by whatever appliances, and at whatever cost; but even they in most instances, are unable to call into requisition the services of hens or hogs, because their parks and plantations were not originally planned for hen-yards and hog-pens, their fruit trees having been scattered through their grounds wherever fancy or convenience directed. It is plain to see then, that father THOMAS’ prescription of a mallet and sheet, will not suddenly be superseded by this contrivance, and that the hens will abide by their dunghill, the swine continue to riot in the congenial thoroughfares of the metropolis, and the fallen fruit be left to be gathered and destroyed by human agency, or not at all.

Somehow, writers upon the curculio seem universally to be possessed of a most amiable insanity. They invest the victims of that little pest with unbounded resources. Their grounds are always broad enough for ‘orchards,’—the one devoted to plums being already set apart, and filled with full grown trees, nothing of course wanting to convert it into an immense piggery, but forty or fifty rods of fence, which, to be in keeping with the grand conception, shall cost from ten to twenty dollars per rod, herds of swine and flocks of fowls being always at hand to stock it. This is the peculiar vagary of one. Another, in his benevolent hallucination, dispensing with pigs and poultry, prescribes pavements. Though the largeness of comprehension which distinguishes the former philanthropist, cannot be claimed for this, yet his scheme involves bricks, stone quarries, and deposits in bank *ad libitum*, if not *ad infinitum*, and provides a separate domain for the usual variety of the lesser fruits, flower beds, and vegetables, each class of which, by the necessities of real life, must occupy a portion of the space which he so liberally dedicates to pavements. But neither of these tantalizing lunatics has the disease in its most desparate form.

The distempered reason of the third, requires the luckless plum grower to be the proprietor of whole ranges of well occupied stables, cart loads of whose seething product are to be applied to his trees, morning and evening—twice a day, I think, sir?—warm, like a poultice; his trees, of course, being a long drive down the park, else the remedy to expel

the invader of the orchard, will be more effectual against the indweller of the mansion. Now, sir, though all very pleasant, this is all very absurd. It has no adaptability, even in a much mitigated form from that in which I have presented it, to the existing condition of things; nor can it now have. One man in a thousand may be able to adopt either suggestion; but the circumstances of the other nine hundred and ninety-nine, render it utterly impracticable. What we want, then, is some remedy of universal application,—something within the reach of all—and let the one thousandth individual, the man of money, take care of himself.

The main cause of the destruction of small birds, which, in the latter of the extracts quoted, you ascribe to “unfledged sportsmen who shoot sparrows,” &c., is wider of the mark than are the youngsters themselves, even in their most random shots. If it be true that there is any great decrease of small birds, which a familiar acquaintance with them for more than thirty years would lead me to gainsay, the cause alledged is not adequate to the result. I have been an ‘unfledged sportsman’ myself. I was born one. I have passed through, in my experience, the whole range of ‘light artillery,’ so terrible to your imagination, from the quill pop-gun to the beautifully telling eloquence of a twin-tubed ‘Joe Manton;’ and, boy or man, I can truly say I never yet met with a disposition, even in the most thoughtless, to squander his ambition upon game so insignificant as the class of birds whose fancied destruction you so feelingly deplore. The instinct of economy, if not of scorn, or a feeling of humanity, would forbid it. What though a ‘sparrow’ may sometimes fall to the ground at a long shot, ‘by way of improvement,’ can such occasional instances be claimed to cause their decrease to so lamentable an extent as to demand for their protection an invocation to law-makers! What though our cities may turn out a few aspiring young Winkles on a pleasant summer’s afternoon, who, with immense preparation, sally into the remote wilderness of the suburbs, and wake the echoes with a reckless disregard of powder and shot, is their destructiveness by any means commensurate with the noise they make? I trow not. Their intended victim, unharmed and unterrified, flies chirruping to the next bush in very mockery of their aim to bag him. It is easier to denounce the boys for wholesale destruction of small birds, than it is to convict them of it, and as popular sympathy is against them, the denunciation as easily passes unquestioned for fact.

The other cause of the decrease of the number of small birds, and consequent increase of insects,—the destruction of our forests,—I believe to be equally groundless. The effect of this destruction is simply to bring in new species of each, and probably quite as many birds, and no more insects than existed before. The robin, the blue-bird, the chipping bird, the swallow, the marten, the wren, the ground sparrow, the oriole, and the many others which enliven our farms and residences, are not found in the forests. They follow in the track of civilization and appear with man and orchards. Alas, too, and so do canker-worms, caterpillars, and curculio. If it is correct, then, to say that the destruction of the forests causes an inordinate increase of insects, it is to the extent only that beech and maples give way to apple and plum trees, and leave destroyers of fruit in place of others that preyed upon the trees of the forest.

And now one word as to the *utility* of birds. It is a common belief that they are great benefactors of man in the destruction of pestiferous insects. To this belief I am an inexorable infidel. Who ever saw one of the whole race touch the caterpillar, which, at this season, infests our orchards; or that other kindred nuisance, which, later in the season, appears on all trees indiscriminately, often wholly enveloping them in its mighty net-work; or the slimy slug; or a single living atom of the endless legion of plant lice; or

the turnep fly; or the striped cucumber bug; or that most vile of all disgusting creatures, the large black pumpkin bug; or, finally, the curculio? What one of the whole feathered race was ever known to harm a hair on the head of any one of these eternally recurring abominations? My own attention has for years been directed to this discovery, and that one among them all which is entitled to our gratitude, even to this extent, remains a *rara avis* still, and BARNUM can find another "Nightingale," sooner than add this marvel to his collection. But, sir, individual instances of this kind amount to nothing, if you can prove a thousand of them. Show me that entire species of bird, the whole end and aim of whose existence is to war exclusively upon one of the above races of insects, and, for the good-will they manifest, I will join you in prayers for legal enactments for their protection, if need be; though my faith in the extermination of the vermin, as the consequence of their enmity, would not be of that buoyant nature effectual to sustain one's head above water, when the remembrance should come over me that angle worms are still plenty, in spite of the determined persistence of the whole generation of robins in the apparently single purpose to gormandize them all. Nevertheless, sir, the birds find in me a zealous protector, and they *know* it. In my own little domain, they are almost as fearless of me and mine, as are the chickens themselves. The pugnacious little wren takes up his habitation in a nook over the front door, and assumes all the bustling importance of one well to do in the world, scolding tremendously at all in-comers and out-goers, by virtue, to be sure, of his being the lawfully taxable proprietor of the premises; the robin hurries down from the tree to pick up the worm I toss him in compensation for the Jenny Lind touches he half strangles himself in trying to imitate, and feeds confidently within a few feet of me in the garden; while I am fairly obliged to walk around the little chipping bird at the kitchen door, to avoid treading on him, so tame have they all become in consequence of gentle deportment towards them. Birds appreciate kindness quickly, and seem even to comprehend the pleasant words that are spoken to them. Though I owe them nothing for preserving my plums and cherries, yet woe to the urchin that molests them within the boundaries of my principality. Their cheerful companionship, their graceful sportings, their varied attempts to express their joyfulness in song, from the ludicrous enthusiasm with which one note is continually cachinated, to very tolerable approaches to successful modulation, give them social claims upon me which compensate a thousand fold for all they destroy, and all they do not.

J. C. H.

Agnesora, June 1, 1868.

[J. C. H. is a heretic—an unbeliever in all written creeds—but he offers no suggestions from his own store-house of experiences. Since he repudiates the alphabet that others have found tolerably useful, is he not bound to give his own system of short-hand? (Ed.)

APPLES AT THE SOUTH.

BY WM. A. WHITE, ATHENS, GA.

A. J. DOWLING, Esq.—Your list of Fruits for the South, in a recent Horticulturist, has induced me to send you the following rough notes upon our apples, as they may be of some interest to those of your readers dwelling in about the same latitude, viz: 33°, 58'.

Our soil is a stiff red clay, formed of decomposed granite—and our elevation 780 feet above the sea. The surface soil is generally pretty free from stone, and by culture and

manuring, becomes a dark loam. Its proportion of lime is scarcely appreciable, by analysis not over one-tenth of one per cent. It is of but moderate fertility, and is naturally pretty well timbered with pine, chestnut, tulip tree, sweet gum, and several species of oak.

With us, the apple is, I think, comparatively with most sections, a difficult fruit to cultivate. A full grown, healthy apple tree, one which is entirely free from disease, is, in this section, a rarity. Occasionally, they suddenly "die and leave no sign" at all—appear thriving as usual in autumn, and in spring are dead, with no assignable cause. Some die gradually, like a peach tree with the yellows, exhibiting for a long time a kind of general debility, which I know not to what to attribute, unless to the too intense action of the sun upon the soil and roots—or perhaps to the deficiency of lime in the soil. We have also the bark louse, and the borer and the caterpillar, but these are no worse than with you. Again, many of our trees have the bark of the trunk blistered, and soon decay, where they are exposed to the rays of the early afternoon sun. Then, worse than all, is that pestilent fellow, the wooly aphid, rightly named the American blight. Here, I believe, he is indigenous, as he is found on the wild crab, as well as on the cultivated varieties, and in situations where one would hardly think he had been introduced. He must be a vigilant watcher, the branches of whose trees this aphid does not "pull the wool over," or cover their roots with the warts produced by his minute lacerations.

Now, these are serious difficulties in the way of the fruit grower, but still the worst of them may be overcome. Bark lice, caterpillars, and borers, a little care in season will destroy as effectually here as anywhere. The sun-burned trunk can be prevented by planting maiden trees, (one year's growth from the bud,) and shortening them in, so, when planted, that branches may be thrown out near the earth. The thick foliage will thus shield the trunk from the sun, and also keeping the roots shaded, will do much to correct the debility we have before noticed. The lime, or whatever other constituents the soil may lack, can from time to time be also supplied, at no very serious trouble or expense.

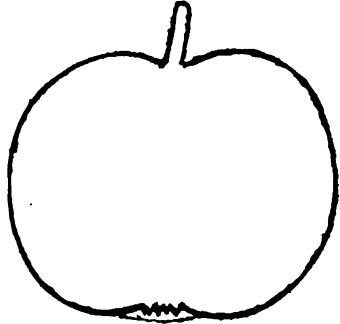
The aphid is more troublesome. If they are on a single tree of the garden, the wind will soon convey them, enveloped in their down, from one end to the other. Each tree, before planting, must be thoroughly worked, and its roots soaked in strong soap suds from the laundry. You will thus be free from the rascal to begin with. But this is not all. Vigilant attention is afterwards required. Every place where they appear, before they have time to seek the roots of the tree, must be coated with a paint composed of soap suds, thickened to the right consistence for application, with quick lime. This is an effectual remedy, and besides a beneficial application to the tree.

In selecting varieties for cultivation here, as it is a matter of some difficulty to raise a good supply of apples at all, the apple being a *northern* fruit, we are obliged to guard against *over refinement*. In regard to a fruit, it is not our first question, is it of the *very highest* quality? but, is the tree sufficiently hardy and productive to bear fruit at all? Will it produce enough to be worth cultivating? When we find a tree to be hardy, and at least moderately productive, it is then quite early enough to inquire which of those, having these indispensable good qualities, and ripening at the same season, are of the highest flavor for the desert or kitchen, and from these to make our selection.

As the peach and pear, are both more easily cultivated than the apple in this section, to say nothing of figs, grapes, &c., which a little care may place *abundantly* on every table, a very large list of summer apples is not desirable. Of these we have enough kinds already. We need good autumn and winter varieties, and for these we must look at home, as all our fine northern winter apples have usually ripened and decayed, the few years they

have been cultivated, before middle of September, at a time when peaches and pears, and other fruits are so abundant, that we care little for the choicest apples. We come now to the description.

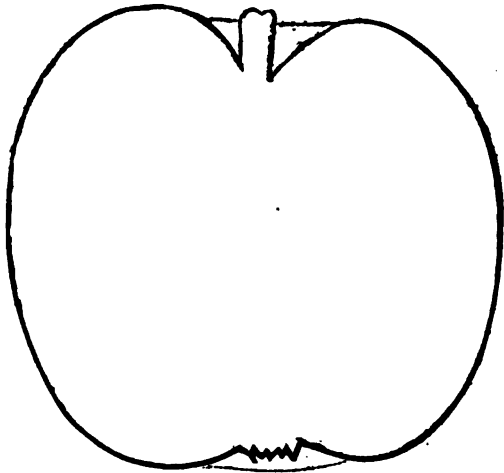
1. *Early May*.—Fruit—quite small, roundish, sometimes slightly oblong; skin—thin, yellowish green when ripe, with occasionally a brownish cheek towards the sun; stem—short, in a shallow cavity; calyx—small, closed, and set in a shallow basin; flesh—yellowish white, tender, of a mild acid, and rather pleasant flavor; begins to ripen from the 15th to the 20th of May. Earliest of apples, which is its only merit. The fruit is generally smaller than the drawing.



Early May Apple.

2. *Early Harvest*.—This fine early fruit is a poor bearer on young trees, but on large, well grown trees, it is, if anything, too productive. It is always of good quality, unless injured by over-bearing. For description see "Fruits and Fruit Trees of America." Ripens here about the 25th of May, and continues some time. Indispensable.

2. *Red June*.—Fruit—medium size, generally somewhat oblong, occasionally flat, and always irregular; skin—smooth, green in the shade, but changes rapidly at maturity, to a fine dark crimson; stem—one and a half to three-fourths of an inch long, inserted in a moderately deep cavity; calyx—set in a shallow basin; flesh—white, very tender, mellow and digestible, fine grained, slightly acid, moderately juicy, but not rich; a good apple, and comparatively a hardy tree. Remarkable for diversity of shape on the same tree, varying from conical to quite flat, and is easily distinguished from all others, by turning within three



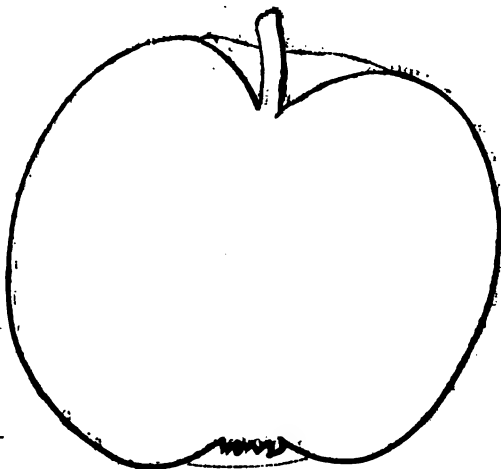
Red June.

days of ripening, from a dull green to a rich crimson, and as it ripens very gradually, the contrast of colors on the same branch is quite striking. A full grown tree will often show not over a dozen or two of the crimson fruit, the rest being perfectly green. Seeds often white when the fruit is perfectly ripe. A very productive and pleasant apple for the desert—lacks acid for culinary purposes. Tree bears young; attains a good size, and is a constant bearer. Ripens here first of June, or a little after.

4. *Striped June*.—Size—medium, not quite so large as Red June; form—roundish, sometimes a little conical; skin—thin, ground greenish yellow, very much striped with red, frequently russet about the stem; stem—short, medium thickness; cavity—small; calyx—medium size, in a shallow basin; flesh—white, more juicy and acid than the foregoing, better for kitchen; not rich, but pleasant. Ripens with the Red June, but is easily

distinguished by its duller red color, and also by being distinctly striped, while the Red June is a complete blaze of crimson. Not so good for dessert, but a good bearer, and a native. Ripens first of June.

5. *Sinclair's Yellow*.—This name we give an apple received from Sinclair's nursery, at Baltimore, and which proves one of the best. Fruit—small to medium, flat or roundish; skin—smooth, of fine orange color, darkened in the sun; flesh—pale yellow, with a rich sub-acid flavor. A good bearer, and excellent for both the table and kitchen. Indispensable. Ripe June 15th.



Striped June.

6. *Maiden's Blush*.—(See "Fruits and Fruit Trees of America.") Perhaps our best foreign variety. A fine hardy tree, bears abundantly, excellent for drying and culinary uses, and good for dessert. Ripens gradually from the first of July, and lasts into August.

7. *Horse Apple*.—This name is given to a class of apples, the different sorts of which, resembling each other in appearance and flavor, but which differ a good deal in quality. All are excellent culinary fruits, lasting a long time, and the best of them are good dessert apples. This apple is propagated with considerable certainty from seed, which has probably caused the different varieties of the same apple. Size—medium to large, roundish, narrowing to the eye, sometimes conical, and somewhat irregular; skin—thick greenish yellow in the shade, but a rich dark orange, or blush towards the sun—often marked with a few russet lines or flecks about the stem; stem—short, rather large, sunk in a shallow cavity—calyx in a narrow basin; core—large, hollow; seeds—few; flesh—yellow, firm, coarse grained, with a rich acid flavor. Well ripened, it is a good table apple, always excellent for cooking. Ripens the last of July, but like your Holland Pippin, fit for cooking a long while before. Continues in use a long time. One of the most productive, valuable, and hardy trees we have, but should be propagated only from the best varieties. One of them in this section, is called the Oldfield Apple.

8. *Mule Carle*.—(See Downing.) This succeeds the Maiden's Blush and Horse Apple, and proves a good and hardy variety. Tree very productive, and almost as well adapted to the climate as the Horse Apple itself. Fruit of excellent quality, ripens the last of August and into September.

9. *Carthorse or Gilpin*.—(See Downing.) Ripens a little later than the foregoing, and a fine fruit for this climate, quality good, tree quite a good bearer, lasts until the middle of September, and sometimes later with care.

Apples that are of as good quality and immediately succeed the Gilpin are very desirable. The latter will keep as long as any northern variety we have tried. From the middle of September until November, I do not know of any good and productive table apples. Some tolerable undescribed and unnamed native fruits, come into the market that will do for the kitchen, but no good table fruits. As most other fruits are gone, what few peaches ripen so late not being of the best quality, Grapes (Scuppernong) not lasting

much after the first of October, when pears and figs are by no means plenty, a few varieties of good apples would be very acceptable. The next good apple begins to ripen about the first of November, viz:

10. *Buff or Granny Buff*.—Fruit—of the largest size, irregular roundish, flattened and slightly angular in form. Skin—thick, ground color yellow, but striped and over-spread with red, very dark next the sun, marked with a few greenish russet spots. Stem three-quarters of an inch long in a medium cavity. Calyx in a large irregular basin. Flesh—yellowish, and when well ripened tender and excellent, but sometimes quite the reverse; lacks richness and acidity; season November to March; indispensable.

11. *Virginia Greening*.—Already described in proceedings of Congress of Fruit Growers at New-York. A good fruit, keeps all winter; indispensable; a better keeper than the Buff.

12. *Waddell's Hall*.—An oblong fruit of medium size, very fragrant—striped with red; of fair quality, bears young, and decidedly the latest keeping apple we have.

13. *Green Mountain Pippin*.—A fine early winter apple of excellent quality, large size, roundish, green, and very juicy; comes into use with the Buff and a better fruit.

The above list I think will be found reliable. There are others which I have hopes will be worthy of adding to the list, such as Limberting, Jackson, Father Abram, Rawle's Jennett, Gravenstein, Meigs, (a celebrated long keeper,) Pryor's Red; but I have not yet seen the fruit. I purchased in a market wagon from North Carolina in the month of November, two years since, some fine Rhode Island Greenings, and I have strong hopes that this too may be added to the list.

I have seen fruit here of American Summer Pearmain, Sweet Bough, Alexander, Baldwin, Danvers Winter Sweet, Newtown Pippin, Boston Russett, Spitzenberg, and many others; but they are in some one or more particulars, so much inferior to those described, some of them rotting before they ripen, others unproductive—that at present I do not think any of them deserve to be added to the list. The early apples from the north do far the best.

You will observe that there is not a single sweet apple in the list. I am trying the Ladies Sweeting, but I do not know of a single sweet apple of the many brought in, that has hitherto proved at all satisfactory. I am told that there is a good native autumn variety, but have not met with it.

Should you desire, I shall be happy to give you a few notes on our other fruits, particularly the pear, which is here raised, I think, with more ease than the apple. Yours very respectfully,

WILLIAM N. WHITE.

Athens, Ga., May 31, 1852.

[We are greatly indebted to our correspondent for the foregoing—one of the best communications on fruit culture we have ever received from the south. More of the same quality will be most welcome. Ed.]

CLOSING REMARKS ON THE THEORY OF PRUNING.

BY L. YOUNG, LOUISVILLE, KY.

DEAR SIR—I shall close the crude and desultory remarks upon the subject at the head of this article, which were at first proposed by a few comments upon certain of the processes in the arts of pruning and training, which in a former number I have styled debi-

litants of the wood-producing force, applicable in the hands of the cultivator as remedies, where unproductiveness results from over-luxuriance—or, as preventives in cases where in a state of fruitfulness the habit of a tree or plant indicates a tendency to the production of too much wood-growth. These processes are:

1. Sterling supplies of food.
2. Neglected cultivation.
3. Retarding the circulation.
4. Breaking the circuit of circulation.

The first of these processes comprises the two very common expedients now practiced to superinduce a state of fruitfulness—root-pruning, and dwarf-pruning. Every tree receives at the extreme points of its rootlets, its supplies of food, which there enter into the circulation by reason of the mysterious attraction of the thicker sap within, for the thinner fluids without, (by *endosmose*;) and nothing is plainer than the fact that, other things being equal, the size and vigor of trees and plants, are to each other in proportion to their number of spongioles, and the space they pervade. It is impossible, therefore, to diminish the number of these rootlets, or the area over which they range, without lessening also, the amount of food carried into their general circulation, and by consequence, the share of each bud. The effect of this operation is very generally understood and appreciated, and also its application as a means of superinducing fruitfulness. Mutilation of the roots, (and root-pruning is only mutilation, nothing more nor less,) lies at the foundation of that very salutary rule, heading back the branches when large trees are transplanted. In this case the demand for food is reduced until the enfeebled condition of the rootlets can meet the requisition.

Most fruit trees, and many plants, are liable to a catastrophe which might be termed, not inaptly, accidental root-pruning. I refer to that strangulation or suffocation of the rootlets resulting from seething and baking rains, sometimes experienced in hot seasons. A visitation of this kind often seems to arrest the circulation, and to bring on a premature decline and fall of the leaf. The cherry, apricot, and plum, are most liable to this affection. Sometimes, however, the apple and pear are not exempt. I have, myself, witnessed instances in which the Rousselette de Rheims, after making shoots four to six feet in length, in the early part of the season, and losing its leaves in July or August, has formed sessile fruit buds throughout the whole extent of such branches, producing thereon a wreath of fruits in the following season. I do not mean to say the fruitlets would be without peduncles, but the clusters without spurs—which is their usual appendage.

Dwarfing fruit trees, by propagating them upon small growing stocks, is only another method of stinting supplies of food. In this case we avoid the necessity of resorting to artificial means to diminish the system of roots, by making choice of stocks whose roots are naturally small—and it appears to me that the whole claim of this practice to favorable regard, rests upon the following considerations only, and not upon any mysterious agency exerted by the stock upon the habits of the graft. 1st. It enables the amateur to cultivate a large number of varieties within a small compass. 2d. Fruits upon dwarf trees, like clusters of the grape upon branches from which the wood-producing force has been removed by amputation, have control of the circulation, and for this reason, larger and finer than upon trees where the wood growth is more active. 3d. Dwarfing simplifies fruit culture—the whole business of cultivation is to stimulate—the balance of power is at all times against wood-growth. One must cultivate and manure; must thin and shorten in. An ordinary fruit tree, when inserted upon a dwarf stock, is not unlike the fox in the fable, at the feast of the storks—its food has to be reached through such dimin-

utive tubes, ("such long, narrow necked vessels,") that there is no danger of growing to excess.

Neglected cultivation, although enumerated in the books as a means of inducing fruitfulness, does not deserve favor, and should always give place in the orchard culture of standards upon their own stocks, to retarding the circulation, by bending down the branches. I believe with JEFFRIES, that precocity should never be encouraged, but believe this method of hastening the bearing state to be attended with fewer evil consequences than almost any other. Suppose the top of a young tree to consist of a few straight switches—these, if bent to a horizontal position, will form fruit buds at the points in a year or two, whilst dormant, or adventitious buds, will put forth at the bases of such switches, and re-fill the center with upright wood growth, the tree forming a head as rapidly, and often with more symmetry, than though the branches had not been bent.

Breaking the circuit of circulation is effected by wringing the branches. This wringing, when not so thorough as to produce the death of the parts cut off by the ring, not only induces fruitfulness, but adds, very often, brilliancy to the hues of colored fruits. Pinching, or cutting off tender shoots, and heading-back branches in full leaf, are operations of a nature very similar to wringing—in many such cases the circuit of circulation is interrupted for a time, and the roots, after undergoing the labor of sending up the material which has formed the amputated branches, never can receive an equivalent—since, by the act of amputation, the organs which should have digested this equivalent of food are destroyed. It is this debilitating tendency in the practice of stripping off the leaves and growing branches, which renders the operation of shortening-in, in the month of August, conducive to fruitfulness—a result exactly opposite to that of the same operation, if applied in February or March.

In conclusion, I may remark, that although in these numbers I may have failed to suggest anything new or useful to the readers of your very popular Journal—still, I think they will have been laid under obligations, even for my errors, if they shall induce the modest, but well informed author of the "Fruit Garden" to redeem his pledge, and spread out in your columns the fruits of his extensive reading, and valuable practical experience, upon this more than interesting subject.

L. YOUNG.

Louisville, Ky., 1892.

FRUIT GROWING AT THE SOUTH.

BY R. G. PARDEE, PALMYRA, N. Y.

ON the 20th inst. it was my privilege to pay a brief visit to the fine estate of that enterprising and successful cultivator, Dr. JOHN H. BAYNE, of Prince Edward county, Maryland.

For many years, he has, by a thorough course of observation and experiment, cultivated a portion of his beautiful grounds, and attained to great skill in almost all departments.

The location is a favorable one for rewarding his efforts, it being only some eight miles from Washington, D. C., which furnishes one of the finest markets in the country. The situation is picturesque and delightful, comprising a variety of scenery—hills and valleys, with all the varieties of soil, from a sandy loam to a coarse gravel and clay.

Some of his lands, which two years ago were worn out and barren commons, I now found laden with the richest fruits. Over *fifteen thousand fruit trees*, in the finest con-

dition, and comprising the greatest variety, may be seen at Dr. BAYNE's, of which some 8,000 are peach trees, which exhibit a vigorous growth and health which would do honor to Delaware, or Western New-York. His crop of peaches this year must be immense, and his income from them very large.

I noticed, also, a very large stock of pears, comprising a great variety. The pear blight has done him great damage in the low grounds and hill sides, while all on the crown of the hills have for years escaped.

The cherry trees seem to be in fine growth and bearing, but I do not think that the noblest of all our fruits, the apple, in all its fine varieties, has yet received that peculiar care in this region, we are accustomed to give it in this vicinity.

The strawberry is most successfully cultivated here, and proves to be a fine source of revenue. Dr. B. has several acres in bearing, comprising the Early Virginia, the Large Early Scarlet, Princess Alice Maud, [and this sort is very fine about Washington. Ed.] and Hovey's Seedling.

The first named is cultivated mainly because it is the earliest, but is evidently very different and inferior to the large Early Scarlet which is a little later. The Alice Maud is a great favorite in this region, being almost as early as the preceding kinds, and much larger and more productive; for the late varieties, Hovey's Seedling is preferred.

It is a great object in that region to obtain the earliest variety, for on the 17th May, in Washington, strawberries brought \$1 per quart. Four days later they had fallen to 50 cents, and four days later still, the price had receded to 25 cents.

I noticed in all that region, the almost universal error prevalent in the cultivation of this fine fruit, viz: an over-feeding of the vines, but a scanty supply of the essential elements which go to compose the fruit, which, if judiciously applied, I am persuaded, would very generally double the strawberry crop, at a trifling expense.

I was particularly interested to observe the manner by which Doctor B. succeeds in bringing the earliest strawberries into market. He selects a coarse, gravel soil side-hill, with a full exposure to the south, and then shelters the field from chill winds, by fences on the rear, and often intermediate, not far distant, closely filled in with evergreen boughs.

A great variety and quantity of vegetables are here produced, among which were 30,000 cabbages, just coming into head, and for which an offer of five dollars per hundred had just been refused, for the whole lot on the ground.

I was surprised to learn that these cabbages were sown last September, and had stood out unprotected and uninjured last winter, where the thermometer touched 8° below zero, (the coldest winter for twenty years.) This was the lowest point the thermometer reached with us last winter. Tea and Noisette Roses I also saw at Dr. BAYNE's, growing finely, which had remained out unprotected—while with us, if the thermometer reached to zero, we should hardly have saved a plant. Why is this? Is it because our atmosphere is more humid?

R. G. PARDEE.

Palmira, May 15, 1862

MEMORANDA ON THE CULTURE OF GRAPE-VINES.

BY H. G., BOSTON.

MR. EDITOR—The following memoranda of the crop of grapes in a cold house, with a span roof, may be interesting to your correspondent, H. B., and other cultivators of the vine. The season here is about a fortnight later than at Staten-Island.

1842, August 16, Pitmastons ripe.

Sept. 4, Black Hamburgs, ripe.

1843, June 1, vines in bloom.

August 15, cut two bunches.

17, " ten "

18 and 20, cut thirteen bunches.

26 and 27, " thirty-three.

15 to September 5, two hundred and forty.

Sept. 5 to Oct. 7, six or seven hundred.

After Oct. 7, six or seven hundred—the whole crop being fifteen hundred and thirty-six bunches, on one hundred vines planted out in 1840, in outside border.

The following hints may be useful to those who are their own architects and gardeners:

1. Build with as much glass, and as little material that will condense moisture, as possible.

2. Place house east and west, and glaze ends as well as roof, and let it be exposed on all sides to sun and light.

As this last direction differs from some opinions expressed in the *Horticulturist*, I give the following reasons for it: I found a house so placed to answer perfectly well, and not to have any inconvenience from too much heat on the south, or too little on the north side. In some seasons, all the light and heat that can be obtained, is not too much to ripen the wood thoroughly; and although I do not know that a house running north and south will not answer perfectly well, yet I have some doubt whether the wood and fruit-buds will ripen as perfectly every year, as in one running east and west.

Hints for management.—1. Uncover vines as early as they are perfectly safe from any sudden check, or in this climate; about the first of May.

2. Force the growth as much as possible, by opening the house late and closing it early, and giving but little air until the grapes begin to color. The degree of heat which the vine will bear in our bright climate, is generally under-rated.

3. Keep the shoots constantly stopped a joint or two above the fruit.

4. Prune as soon as possible after wood is ripe, so that the wounds may heal before winter. With attention to these few rules, a crop even of the Alexandria Muscat, (one of the grapes not easily raised in England without fire,) may be secured every year in this climate, in a cold house; and any heating apparatus is entirely unnecessary, unless you wish fruit before the middle of August.

Mr. KNIGHT, in a paper read to the Horticultural Society, May, 1816, explains very fully the forcing by closed houses, and sun heat. This article is well worth republishing, as it is especially applicable to this climate, where as your correspondent on the culture of the Victoria Regia observes, a much greater degree of heat can be kept up, than in England. I think it not impossible that grapes could be ripened in Ward's cases, in our summer weather. I have kept a house closed for some time, I think two or three weeks, without injury to fruit or vines, in mid-summer.

H. C.

Boston.

[As we recognise in the above, the pen of "one who knows," we take the occasion to add that our preference for a north and south line for a vinery, must be taken as applicable to the climate of this country generally—of which the middle states must be taken as the average. The climate of Boston, (and New-England generally,) is much cooler in summer than that of Philadelphia—and therefore, so much less identical with that of the country generally. Ed.]

ZAUSCHNERIA CALIFORNICA.

[FROM THE LONDON HORT. MAGAZINE.]

Zauschneria Californica, Presl (Californian Zauschneria.)—Onagraceæ § Epilobææ.

To the indifferent observer, there is not much resemblance between the Evening Primrose and the Fuchsia; and yet, in fact, their structure so closely corresponds, that they are ranged in the same natural family,—that of Onagraceæ. The resemblance, it is true, is not so much in outward aspect as in their internal structure, which, if examined, will be found to present many points of accordance. The *Zauschneria*, however, to some extent, links them together even in outward aspect; the general habit and appearance of this plant is such as would be readily identified in general character, by a slightly practiced eye, with some of the forms of *Oenothera*, and the blossoms are not unlike those of the *Fuchsia*.

It will be seen that the number four, or some multiple of four, prevails in the floral parts of all these plants; thus, the calyx has four lobes, whether it be the colored calyx of the *Fuchsia*, or the green calyx of the Evening Primrose; the petals, also, are four in either case. In some plants the order of the stamens are four, in a few instances half four, and in the *Fuchsia*, and many others, twice four; the stigma is more often four-lobed, and in one species of *Fuchsia* these lobes are so apparent, that it has in consequence, been named *tetradactyla*, or four-fingered. Where this kind of structure is present, the plants are said to be tetramerous, from the Greek *tetra*, which signifies four. Among exogenous plants, this tetramerous structure is not by any means so common as the pentamerous, in which the number five rules in some or all of the floral organs; while, on the other hand, among endogens, the parts are usually arranged by threes.

This *Zauschneria* has been for some time known and regarded as a desideratum for our gardens. It has lately been obtained from the California fields, by Mr. Hartweg, the collector for the Horticultural Society of London, and proves to be, as was expected, a plant of considerable beauty, and therefore a very interesting and valuable addition to our collections. It is an herbaceous perennial, and quite hardy if planted in a situation where it is not exposed to much damp about the roots in the winter season. Its habit is branching and bushy, and as it grows about three feet high, it forms, from its size, an object of some attraction, especially as the blossoms are of large size, and very numerous produced. The stems are furnished with ovate leaves, which are slightly toothed on the margin, and attached without any intermediate stalk, or, as it called sessile. These stems become



much branched, and every one of the branches produces from the axils of the leaves towards its apex, one blossom, which assumes a nearly horizontal position, is about an inch and a half in length, and is of a bright scarlet color. The calyx is tubular, with a four-cleft apex, the sepals being rather narrow and sharp pointed, and the tube itself marked with four stout ribs; the corolla consists of four petals, which are universally heart-shaped, and spread out nearly or quite flat; the stamens, which are eight in number, and the stigma which is four lobed, are all red, and project considerably beyond the corolla. It will thus be seen, that although in many respects approaching near to a *Fuchsia* in appearance, it is, in fact, very distinct from that, and all other flowers at present cultivated in our gardens, and will probably become highly prized as an ornamental species.

Mr. Hartweg found it "in fields about Santa Cruz, in California," from whence seeds were sent, and received in England, in May, 1847. Sown in May, the seeds produced plants which, though of perennial duration, blossomed by the month of September. Probably when established, it will be found to produce its blossoms throughout the summer season.

The cultivation of this plant is stated in the *Journal of the Horticultural Society*, to be extremely simple. "The plant grows freely in good garden soil, and is easily increased by cuttings or seeds." A warm dry situation would be the most likely to ensure success in its cultivation.

[This pretty plant is quite hardy in our garden. Ed. Hort.]

NORTHERN PEACH TREES AT THE SOUTH.

BY EDWIN J. SCOTT, COLUMBIA, S. C.

THE following remarks on northern fruit trees, from a correspondent in South Carolina, deserve an insertion as a rejoinder to contrary statements from other experienced southern cultivators. The question is an interesting one, and can only be settled by more testimony, which we hope our southern readers will furnish. Ed.

DEAR SIR—You have published one or two communications in the *Horticulturist*, from Mr. Harwell, of Mobile, stating that northern peach trees had entirely failed to bear in that vicinity for some years, and giving as the supposed reason, the strange fact that they bloomed a month or six weeks *after* the native trees, and that, consequently, the fruit was killed by late frosts in the spring. This writer seems to conclude that we ought to depend entirely on southern trees for fruit.

Now, my experience has brought me to a different conclusion, and as there is beginning to be considerable interest felt among us in relation to the culture of fruit, it may not be amiss to give that experience, and thus prevent others from being misled by those, and similar publications.

The wise remark of a wise man, that "a great deal may be said on both sides," seems particularly applicable in this case.

I shall confine myself strictly to what has occurred within my own knowledge—deeming abstract reasoning on this point as worse than useless—it being always easy enough to find reasons for any fact when once it has been established. Long and learned disquisitions have been published, to show that, according to scientific principles, northern trees are unfitted by nature for a southern climate. That they will succeed in Columbia (what-

ever they may do in Mobile) I have proved beyond doubt, by repeated experiments within the last ten years.

The first that I planted were purchased in 1842. As soon as they came into bearing, I was so pleased with the fruit as to order more. Finding them to do well, I have planted more or less every year since, budding and grafting from them as my leisure would allow, and selling thousands just as received from New Jersey.

My trees have not failed to bear *every year* since they became old enough, although in some very unfavorable seasons the crop has not been large. But Columbia is so happily adapted to the production of peaches, that we rarely ever miss a crop—most generally having so many as to break down the trees, and diminish the size of the fruit. In this respect I see no difference between my northern and native trees.

Last year, notwithstanding repeated thinning, my northern and other trees nearly all broke with fruit, after having borne an abundant crop the year before; and yet this spring they were overloaded again, till the very severe weather of the 19th and 20th ult. thinned some of them out rather too much. Still there is a pretty fair crop left.

Those persons to whom I have sold trees generally make the same complaint, viz: that they bear not too few, but too many.

Since the appearance of Mr. HARWELL's piece in the Horticulturist last spring and this, I have paid particular attention to the flowering of my northern and native trees, without discovering any difference as to time, although they stand side by side. He says that in Mobile the peach trees from the north bloom about the first of April—some six weeks after those raised there. If they could be thus retarded *here* it would be their highest recommendation, for then the crop would not fail more than one year in twenty throughout the state—the late frosts here doing all the damage, and very seldom coming later than the 10th or 15th of April, which would correspond with the 1st in Mobile. My peaches when killed this year on the 19th of March, were about the size of a garden pea, having the remains of the flower wrapped around the fruit. They would have escaped of course, if they had not bloomed till the first or 15th of April.

If we could have any assurance that trees from the north would always arrive in good condition, there would be no necessity for propagating them here, except certain choice kinds, of which we have several not known or cultivated by their nurserymen; for many of their peaches, especially the earlier varieties, are unsurpassed in quality, while the immense quantities produced in some of the northern and middle states for sale has reduced their prices very low.

But there is the risk of having unhealthy trees sent, of their drying out from bad packing, or a long voyage, and still more of their freezing on the way. From these several causes many are lost every winter, and they are the only real objections to buying or planting northern trees. The foregoing remarks apply to peaches only.

As to pear, plum, and cherry trees, we are dependent for the present almost altogether on the north, there being no choice varieties among us but what have been brought from abroad. Of course they can be propagated here, but it requires time. Out of Columbia I know of no one engaged in raising them for sale in the state.

EDWIN J. SCOTT.

CRITIQUE ON THE MAY HORTICULTURIST.

BY JEFFREYS.

Brown Houses and Lightning Rods.—A man travelling in Yankee land, or 'York state, as he works into the suburbs of the cities, and through the villages, finds nothing more common than pretending *snuff* colored houses—not "rappee," which is a reasonably decent color, by the way—but of the genuine "Maccaboy," or over-burnt coffee color; and ten to one, the same thing bristling with lightning rods, like the bayonets in a stack of militia muskets on a "training day." I once counted no less than twelve of these useless things on one house and its attachments. "If you want to burn your house," said an old experienced builder to me one day, "put a lightning rod on to it, and you will succeed." I believe in a majority of cases, a building is better without than with them, and more particularly if there be high trees in the vicinity.

As to the color of houses and out-buildings, there is no governing the "fashion" that may prevail. Up to within ten years ago, white was the prevailing color of the good houses. Yellow or straw color, was used somewhat; and for farm houses, anything short of a first class establishment, was either a Venitian Red or a Spanish Brown, if painted at all. But somebody—no matter who, made a dash out of rule; smeared a house or two with the vile pigment called "Victoria Brown," and since then it has been the color, *par excellence*, for everybody's house, except now and then a man who had an idea of his own, and thought he knew better than to stain his house with the vile compound. I trust some of your readers will heed this article, and try to influence a better taste in his own neighborhood.

The Victoria Regia.—It is a gratifying feature in American experiment, that where pains be taken, and a corresponding expense be indulged, our gardeners equal, if they do not excel, in the luxuriance of display, and the delicacy in flavor of their productions, the corresponding examples in England, the land of all perfection in developing the most successful results in almost everything which they, the English, undertake. Artificial heat and ventilation there supplies the advantages of sunshine and air to an otherwise over-loaded atmosphere of cloud and vapor, and the more gorgeous and luxuriant plants of the vegetable world are exhibited in all their native grandeur and magnificence. Thus the English succeed in producing many articles of *luxury* to them, which our most negligent people often have in profusion in their ill-worked gardens.

The journal—(for it is truly a journal—the stated accounts which Mr. MEEHAN has given of the progress of this noble flower of Mr. COPE's,) of the Victoria Regia under American cultivation, is full of instruction to all interested in the progress of floriculture in the United States, and Mr. COPE is entitled to the gratitude of every lover of this most agreeable branch of gardening, for his liberality and public spirit in introducing its cultivation among us.

The Theory of Pruning.—Much good sense, and sound observation, is embodied in this article. Mr. YOUNG is a close observer, and talks like one who has given nice practice to the development of his theory. Every fruit-grower should carefully examine this paper, and he cannot but receive benefit in its suggestions.

Horticultural Notes from Michigan.—Mr. ADAIR has most opportunely opened a new country for our investigation—Michigan—a state from which your readers have not for a long time heard. *One hundred and twenty-eight bushels of pears on a single tree, in one*

season! Well, Detroit "may walk up to the head." Why cannot Mr. ADAIR get some of the soil analyzed, in which the luxuriant old pear trees grow, and see what it is composed of? It would be gratifying to our pomologists to know. Still the fact of the antiquity of the trees, and their height and circumference, is not to be doubted any more than that they have *always* stood there, for all that any living man knows to the contrary. And that the trees have been entirely neglected in their cultivation from infancy, is quite as probable—for who ever knew a French *habitan*, or *Coreur du 'bois*, as that distant country was for two centuries inhabited with, to take care of any thing beyond his beaver traps or fishing tackle?

When your new grafts on the old trees begin to bear, will you, Mr. ADAIR, be so kind as to send to this paper, an account of the fruits produced. It will be an interesting subject. May we not, now the ice is out of Detroit river, again hear from that favored region?

The Orange Pear once more.—When those two bellicose gentlemen get the Orange Pear controversy down to a tangible point, I may have a word to say about it. Meantime the world may learn something of the qualities which constitute a good table, and a good cooking fruit, as distinguished from each other; for now, I venture to say, not one in ten of our house-keepers, know the difference, although they have cooked fruit for fifty years of their lives, and will put one thing into the stew-pan, or the oven, as soon as they will the other, and wonder, in both the cooking and the taste, what should make the difference between them. These subjects should be better understood than they are.

As to the excellence of the Porter Apple, Mr. ALLEN has not a whit over-rated it. The longer he tries it, the more confirmed will he be in its good qualities.

Warming and Ventilating Houses.—Read this over and again, every one who is building a house, and all who contemplate introducing stoves and warming apparatus of any kind, into those already occupied. No more important subject can occupy your attention.

Messina, a Country Seat on the Hudson.—I never passed up or down the Hudson on a pleasant day, and gazed on the magnificence of its scenery, and the grand old homesteads of its ancient land-holders, but I found myself mentally breaking into the soul-stirring lyric of Lord BYRON, in Don Juan:

"The mountains look on Marathon—
And Marathon looks on the sea;"

with the transposition of a word or two, so graphically does the description apply to these noble houses. Nor can CHILDE HAROLD's glowing Rhapsody to the Rhine, exceed in truth what may as well be said of the scenery along the Hudson:

"The castled crag of Drachenfels
Frowns o'er the wide and winding Rhine,
Whose breast of waters broadly swells
Between the banks that bear the vine,
And hills all rich with blossomed trees,
And fields which promise corn and wine,
And scattered cities crowning these,
Whose far white walls along them shine.
*
The river nobly foams and flows,
The charm of this enchanted ground,
And all its thousand turns disclose
Some fresher beauty varying round."

In fifty years from this, what river in the universe will equal the Hudson, in its features of mountain, wood, and park, and lawn, and house and water, every where scattered

along its borders, and each enjoying its own peculiar point of sight and beauty? And yet, most of the foreign tourists, who come here to make books about us and our country, cannot discover anything remarkable in the scenery of the Hudson!

Messina is a grand house,—dignified, rich, and spacious; worth a score of the modern Gothic and castellated gimcracks now getting to be so common, and built at a cost of double the money. I wish you had inserted the ground plan and in-door accommodation as well, and then we could get a full idea of its character.

Apple tree Borers.—It is next to impossible to find the whereabouts of this destructive insect by inserting a wire into the tree, by reason of its tortuous track inside the bark. The worm does not go straight into the trunk from its entrance. Sometimes it will turn up, or down, and progressing half an inch or more, will turn and wind half way round it through the sap wood, and then work up or down again, as the case may be. There is no so effectual way as to take a sharp pointed jack-knife, and cut at once into the tree at its entrance, and follow the miscreant till you find him. It is sometimes a severe operation to the tree, I confess, but not fatal, and far better than to permit him to continue his ravages. This is an *effectual* cure. The soap and tobacco may reach him, or it may not. As a wash, however, it is good for the tree; and if it hit the grub it will destroy him. I have sometimes followed him with my knife, for an inch or two, through a compact mass of borings, which he had left in his rear, in which no wire could penetrate. In fact you can be sure of nothing, short of a thorough search with the knife. JEFFREYS.

REVIEWS.

RURAL ARCHITECTURE; *being a complete description of Farm-houses, Cottages, and out-buildings.* By LEWIS F. ALLEN. New-York: SAXTON, 1 vol. 384 p.p. 12 mo.

When a plain practical farmer undertakes to write a book on architecture, no one will expect his book to smack of VITRUVIUS or PALLADIO, any more than one would expect a good house painter to turn out VANDYKES and RAPHAELS. Accordingly, any one who looks for very correct and studied architecture in Mr. ALLEN's excellent book will be disappointed—since not one of the buildings represented in the volume would bear criticism by the laws of beauty and proportion, which govern, or are supposed to govern, architecture as a fine art.

Having said this, we are bound to add that the author entirely disclaims being an architect, and begins his preface by an apology for “attempting a work on a subject of which he is not a professional master, either in design or execution.”

On the other hand, we take great pleasure in saying that Mr. ALLEN has not written a book like many books that are now inflicted upon the public, for either money or fame, but because he had something to say. If he is not an architect, he is a sagacious clear headed, American farmer, who knows, perhaps, better than most architects, what sort of comforts and conveniences farmers want—and how to get at such a house, and such barns and out-buildings as are really practicable, and adapted to the circumstances of an American farmer's life. Accordingly, every page is full of instruction for those of the farming class who are about building, and instruction not drawn from theory—but from actual experience—the experience of a man who lives, eats, drinks, and sleeps like a farmer, and who makes all about him fall into its right place, and obey that

master spirit which marks the difference between the chaos of the sluggard, and the order of the true husbandman.

Very few persons live upon a farm five years, without wishing to build something, if it is only a piggery; but the misfortune of farmers as a class, has hitherto been, that for the most part they "build as their fathers builded"—they take no pains to see what any one with more knowledge or thought than themselves may have done; unlike mechanics and manufacturers they seek none of the new improvements, and consequently, but for Yankee plough makers, and inventors of all sorts, who woult let the farm escape them altogethether, they echo the song of the fishes who heard the sermon of SAINT ANTHONY:

"Much delighted were they,
But preferred the old way."

Mr. ALLEN is none of this antideluvian race of farmers. He is for making the most of farmers and farming—looking upon it as the occupation of occupations, and its followers as men who ought live with less ostentation and more substantial comfort, than any other. His remarks on this topic are all in the right spirit, and though not original with him, it is most gratifying to see by his utterance of them, the farming class and its wants vindicated by a champion from among themselves. We have always noticed that in this country, any reform, to be salutary and progressive, must originate among the very men who are in need of it; and architects may publish designs for farm houses for centuries, if farmers do not feel the need of any improvement; it is no better than preaching in English to our Rocky Mountain Indians.

Hence, we look upon it as the great merit of Mr. ALLEN's book, that it will cause in the farming class a desire for improvement, by placing before them plans of dwellings and farm buildings adapted to their wants, and by treating of these wants in a way that they can easily understand. Put a plain farmer in direct connection with an architect who considers high art as the first end of his artistic existence, and the two parties will most probably so completely misunderstand each other, as to do each other harm instead of good. And besides this, American farmers, as a class, are not in want of the aid of professional architects. Their homes would be quite spoiled to our own taste, if treated according to any severe rules of art. We are most delighted with that farm house which is most simply and directly expressive of a comfortable, substantial, rural life—with little decorations except those of trees and vines, and characterised, inside and outside, by the simplest good taste, and most direct expression of harmony, with the simple natural life of the agriculturist in the midst of his fields. When we said that Mr. ALLEN's book had very little *architecture* in it, we should not be understood to find fault with it on this account. If farmers can, by means of such works as this, be led to think for themselves on the subject it treats of, and commence by raising their homes in the scale of comfort, utility and convenience, and the charm of looking like farmer's houses, we shall feel confident that beauty of form and expression will speedily follow.

The plans of farm-dwellings in this volume, are valuable mainly for the excellent common sense they show, and the knowledge of the wants of the farmer's every day life. We are confident that an hour's study of them by any farmer about to build, will materially change and improve all his crude notions, and put him in the way of contriving, with the aid of his carpenter, a very satisfactory home for himself. There is very little aim at either elegance or beauty in the interior arrangement—but for the most part the buildings do not demand it, and greater beauty of plan could not be achieved without a neglect of the more obvious and necessary attributes and conveniences demanded. All the minor conveniences of the farm-house, wood-house, wash-house, piggery, stables, &c.,

have not only been well considered, but their arrangement is generally such as to command the greatest convenience and least loss of time and labor. The advantage of Mr. ALLEN's plans for farm-houses, over most of those that have been published in the *Agricultural Journals*, is very striking.

As regards the exterior of the designs, we are not so well satisfied. There is a want of *substance* in the construction of the verandas, gables, and eaves, that conveys a flimsy appearance to a farm-house, which is quite contrary to the expression it should have. We very well know that the reason of this is that they are, for the most part, *wooden buildings*—and that cheapness leads our carpenters to build any thing of wood as light as possible. Having constructed several wooden buildings on a somewhat contrary principle—making all the thin lines twice as thick as usual, with the greatest improvement in appearance and expression, we cannot but feel that cheap carpentry will always have a tendency to degrade the character of all our rural dwellings, so long as they are of wood. While wood is cheaper than brick or stone, of course we must submit to this state of things—and it is not, perhaps, unfitting to the still unsettled condition of our new country, that its first dwellings should be of wood. But we miss in all our wooden farm-houses, that substantial, solid, real look, that harmonizes so well both with rural life and pastoral scenery, and which is always felt on seeing farm-houses well built of honest solid stone or brick. Any one who has seen English farm-houses, or some of the best specimens in Pennsylvania, will at once understand what we mean.* It is the difference between froth and essence—between flimsy make-shift and genuine fact. But this is, (at least in the country) our *wooden age*, and Mr. ALLEN, as well as the majority of us, must accept it as such, and build and live, for the time and generation, in wooden houses. But we would counsel the farmers who can afford it, to give their wooden houses some appearance of solidity. Let them thicken the eaves, make the veranda posts solid and heavy, and have no light fancy work—and so eschew all those ghostly scantling apparitions of dwellings that rise up under the saw and chisel of very cheap contracts all over the country.

Mr. ALLEN touches upon every thing that relates to the inside and outside of the house or the farm, and if his straight forward, pithy remarks, will only be taken for their full value, by the wives and daughters of the class to which he belongs, we shall speedily look for a new and more healthy pulsation in the social heart of the masses of the people. Having been preaching the same kind of doctrine for some time past ourselves, we need not say that we most cordially agree with all our author says in the following remarks on "house and cottage furniture:"

"HOUSE AND COTTAGE FURNITURE.—This is a subject so thoroughly discussed in the books, of late, that anything which may here be said, would avail but little, inasmuch as our opinions might be looked upon as "old-fashioned," "out of date," and "of no account whatever,"—for wonderfully modern notions in room-furnishing have crept into the farm house, as well as into town houses. Indeed, we confess to altogether her ancient opinions in regard to household furniture, and contend, that, with a few exceptions, "modern degeneracy" has reached the utmost stretch of absurdity, in house-furnishing, to which the ingenuity of man can arrive. Fashions in furniture change about as often as the cut of a lady's dress, or the shape of her bonnet, and pretty much from the same source, too—the fancy shops of *Paré*, once, in good old English, Paris, the capital city of France. A farmer, rich or poor, may spend half his annual income, every year of his life, in taking down old, and putting up new furniture, and be kept uncomfortable all the

* The common prejudice against the old stone or brick houses, on account of their dampness, is of no moment in a house, the walls of which are fired off.

time; when, if he will, after a quiet, good tempered talk with his better half, agree with her upon the list of *necessary* articles to make them *really comfortable*; and then a catalogue of what shall comprise the *luxurious* part of their furnishings, which, when provided, they will fixedly make up their mind to keep, and be content with, they will remain entirely free from one great source of "the ills which flesh is heir to."

"It is pleasant to see a young couple setting out in their housekeeping life, well provided with convenient and properly selected furniture, appropriate to all the uses of the family; and then to keep, and use it, and enjoy it, like contented, sensible people; adding to it, now and then, as its wear, or the increasing wants of their family may require. Old familiar things, to which we have long been accustomed, and habituated, make up a round share of our actual enjoyment. A family addicted to constant change in their household furniture, attached to nothing, content with nothing, and looking with anxiety to the next change of fashion which shall introduce something *new* into the house, can take no sort of comfort, let their circumstances be ever so affluent. It is a kind of dissipation in which some otherwise worthy people are prone to indulge, but altogether pernicious in the indulgence. It detracts, also, from the apparent respectability of a family to find nothing *old* about them—as if they themselves were of yesterday, and newly dunned out of a modern shop-keeper's stock in trade. The furniture of a house ought to look as though the family within it once had a grandfather—and as if old things had some veneration from those who had long enjoyed their service.

"We are not about to dictate, of what fashion household furniture should be, when selected, any further than that of a plain, substantial, and commodious fashion, and that it should comport, so far as those requirements in it will admit, with the approved modes of the day. But we are free to say, that in these times the extreme of absurdity, and unfitness for use is more the fashion than anything else. What so useless as the modern French chairs, standing on legs like pipe-stems, *gerote-ing* your back like a rheumatism, and frail as the legs of a spider beneath you, as you sit in it; and a tribe of equally worthless incumbrances, which absorb your money in their cost, and detract from your comfort, instead of adding to it, when you have got them; or a bedstead so high that you must have a ladder to climb into it, or so low as to scarcely keep you above the level of the floor, when lying on it. No; give us the substantial, the easy, the free, and enjoyable articles, and the rest may go to tickle the fancy of those who have a taste for them. Nor do these flashy furnishings add to one's rank in society, or to the good opinion of those whose consideration is most valuable. Look into the houses of those people who are the *really* substantial and worthy of the land. There will be found little of such frippery with them. Old furniture, well preserved, useful in everything, mark the well-ordered arrangement of their rooms, and give an air of quietude, of comfort, and of hospitality to their apartments. Children cling to such objects in after life, as heir-looms of affection and parental regard.

"Although we decline to give specific directions about what varieties of furniture should constitute the furnishings of a house, or to illustrate its style or fashion by drawings, and content ourselves with the single remark, that it should, in all cases, be strong, plain, and durable—no sham, nor ostentation about it—and such as is *made for use*; mere trinkets stuck about the room, on center tables, in corners, or on the mantel-piece, are the foolishest things imaginable. They are costly; they require a world of care, to keep them in condition; and then, with all this care, they are good for nothing, in any sensible use. We have frequently been into a country house, where we anticipated better things, and, on being introduced into the "parlor," actually found everything in the furniture line so

dainty and "prinked up," that we were afraid to sit down on the frail things stuck around by way of seats, for fear of breaking them; and everything about it looked so gingerly and inhospitable, that we felt an absolute relief when we could fairly get out of it, and take a place by the wide old fireplace, in the common living room, comfortably ensconced in a good old easy, high-backed, split-bottomed chair—there was positive comfort in that, when in the "parlor" there was nothing but restraint and discomfort. No; leave all this vanity to town-folk, who have nothing better—or who, at least, think they have—to amuse themselves with: it has no fitness for a country dwelling, whatever. All this kind of frippery smacks of the boarding school, the pirouette, and the dancing master, and is out of character for the farm, or the sensible retirement of the country.

"In connection with the subject of furniture, a remark may be made on the room arrangement of the house, which might, perhaps, have been more fittingly made when discussing that subject, in the designs of our houses. Some people have a marvellous propensity for introducing into their houses a *suite* of rooms, connected by wide folding-doors, which must always be opened into each other, furnished just alike, and devoted to extraordinary occasions; thus absolutely sinking the best rooms in the house, for display half a dozen times in the year, and at the sacrifice of the every day comfort of the family. This is nothing but a bastard taste, of the most worthless kind, introduced from the city—the propriety of which, for city life, need not here be discussed. The presence of such arrangement, in a country house, is fatal to everything like domestic enjoyment, and always followed by great expense and inconvenience. No room, in any house, should be too good for occupation by the family themselves—not every day, and common place—but occupation at any and all times, when convenience or pleasure demand it. If a large room be required, let the single room itself be large; not sacrifice an extra room to the occasional extension of the choicer one, as in the use of folding-doors must be done. This "parlor" may be better furnished—and so it should be—than any other room in the house. Its carpet should be not too good to tread, or stand upon, or for the children to roll and tumble upon, provided their shoes and clothes be clean. Let the happy little fellows roll and tumble on it, to their heart's content, when their mother or elder sisters are with them—for it may be, perhaps, the most joyous, and most innocent pleasure of their lives, poor things! The hearth rug should be in keeping with the carpet, also, and no floor-cloth should be necessary to cover it, for fear of soiling; but everything free and easy, with a comfortable, inviting, hospitable look about it.

"Go into the houses of our great men—such as live in the country—whom God made great, not money—and see how *they* live. We speak not of statesmen and politicians alone, but great merchants, great scholars, great divines, great mechanics, and all men who, in mind and attainments, are head and shoulders above their class in any of the walks of life, and you find no starch or flummery about them. We once went out to the country house—he lived there all the time for that matter—of a distinguished banker of one of our great cities, to dine, and spend the day with him. He had a small farm attached to his dwelling, where he kept his horses and cows, his pigs, and his poultry. He had a large, plain two-story cottage house, with a piazza running on three sides of it, from which a beautiful view of the neighboring city, and water, and land, was seen in nearly all directions. He was an educated man. His father had been a statesman of distinguished ability and station at home, and a diplomatist abroad, and himself educated in the highest circle of business, and of society. His wife, too, was the daughter of a distinguished city merchant, quite his equal in all the accomplishments of life. His own wealth was competent; he was the manager of millions of the wealth of others; and his

station in society was of the highest. Yet, with all this claim to pretension, his house did not cost him eight thousand dollars—and he built it by “days-work,” too, so as to have it faithfully done: and the furniture in it aside from library, paintings, and statuary, never cost him three thousand. Every room in it was a plain one, not more highly finished than many a farmer’s house can afford. The furniture of every kind was plain, saving, perhaps, the old family plate, and such as he had added to it, which was all substantial and made for use. The younger children—and of these, younger and older, he had several—we found happy, healthy, cheerful, and frolicking on the carpets; and their worthy mother, in the plainest, yet altogether appropriate garb, was sitting among them, at her family sewing, and kindly welcomed us as we took our seats in front of the open, glowing fireplace: “Why, sir,” we exclaimed, rubbing our hands in the comfortable glow of warmth which the fire had given—for it was a cold December day—“you are quite plain, as well as wonderfully comfortable, in your country house—quite different from your former city residence!” “To be sure we are,” was the reply; “we stood it as long as we could, amid the starch and the gimcracks of—street, where we rarely had a day to ourselves, and the children could never go into the streets but they must be tagged and tasselled, in their dress, into all sorts of discomfort, merely for the sake of appearance. So, after standing it as long as we could, my wife and I determined we would try the country, for a while, and see what we could make of it. We kept our town-house, into which we returned for a winter or two; but gave it up for a permanent residence here, with which we are perfectly content. We see here all the friends we want to see; we all enjoy ourselves, and the children are healthy and happy.” And this is but a specimen of thousands of families in the enjoyment of country life, including the families of men in the highest station, and possessed of sufficient wealth.

“Why, then, should the farmer ape the fashion, and the frivolity of the butterflies of town life, or permit his family to do it? It is the sheerest possible folly in him to do so. Yet, it is a folly into which many are imperceptibly gliding, and which, if not reformed, will ultimately lead to great discomfort to themselves, and ruin to their families. Let thoughtless people do as they choose. Pay no attention to their extravagance; but watch them for a dozen years, and see how they come out in their fashionable career; and observe the fate of their families, as they get “established” in the like kind of life. He who keeps aloof from such temptation, will then have no cause to regret that he has maintained his own steady course of living, and taught his sons and daughters that a due attention to their own comfort, with economical habits in everything relating to house-keeping, will be to their lasting benefit in future.”

Another point in which we join hands entirely with the author, is his dislike of close stoves, which seem to have crept into farmer’s houses, even of the best description, to steal away both health and cheerfulness from the family circle. We have but little respect for those housewives or their daughters, who tell us it “is so much less trouble” to use a close stove, when we know that this grudgery of trouble lays the foundation of innumerable diseases, and costs ten times its value in doctor’s bills. Though we observe that in compliance with the building fashion of the day, Mr. ALLEN has omitted all open fire-places in his bed-rooms, and only shown flues for stove-pipes, he protests against the stove poison in the following frank and straight forward manner:

“The general introduction of cooking stoves, and other stoves and apparatus for warming houses, within the last twenty years, which we acknowledge to be a great acquisition in comfort as well as in convenience and economy, has been carried to an extreme, not only in shutting up and shutting out the time honored open fireplace and its broad hearth-

stone, with their hallowed associations, but also in prejudice to the health of those who so indiscriminately use them, regardless of other arrangements which ought to go with them. A farm house should never be built without an ample, open fireplace in its kitchen, and other *principally* occupied rooms; and in all rooms where stoves are placed, and fires are daily required, the *open* Franklin should take place of the close or air-tight stove, unless extraordinary ventilation to such rooms be adopted also. The great charm of the farmer's winter evening is the open fireside, with its cheerful blaze and glowing embers; not wastefully expended, but giving out that genial warmth and comfort which, to those who are accustomed to its enjoyment, is a pleasure not made up by any invention whatever; and although the cooking stove or range be required—which, in addition to the fireplace, we would always recommend, to lighten female labor—it can be so arranged as not to interfere with the enjoyment or convenience of the open fire."

One of the most valuable parts of the book is the latter half, in which all the out-buildings of the farm—bee-house, piggery, poultry-houses, dairy buildings—as well as domestic animals of all kinds, are briefly and practically treated of. Here Mr. ALLEN is completely at home, and his remarks will be texts for those who are beginners in those matters. Altogether, we look upon his volume as one of the most valuable contributions to the country library yet made by an American farmer. It is a good harbinger of that general enlightenment of our great industrial class, that we so fully believe to await the American agriculturists.

Foreign and Miscellaneous Notices.

LIQUID MANURE.—There is nothing in the able Report of the Board of Health, of more horticultural importance than the evidence collected on the mode of applying liquid manure. Not that it contains anything new upon the subject, but because what it does contain is well put, and ably illustrated. Our own columns bear ample testimony to the difficulty of impressing upon the minds of gardeners the extreme importance of employing such fluids in a state of great dilution; for, notwithstanding our repeated warnings, and the wise practice of their neighbors, men are still to be found so unintelligent as to insist upon using strong liquid manure. "How strong may I make it?" says one correspondent. "Of what use is it, if it be weak?" writes another. "Why can't I put on plenty at once, instead of being always at it?" demands a third. In vain we advise, in vain point out reasons; we find the same class of questions incessantly repeated. Let us hope that the following quotation from the Report before us will assist in dispersing the mistiness which still hovers over some portions of the horticultural mind:

"Sir JOSEPH PAXTON collects at Chatsworth the manure water from water-closets, horse-dung linings, and various other sources, into large covered tanks; the waste also from a small bath is emptied into one of these, by which means the solution becomes very thin. The li-

quid so collected passes almost immediately into a state of incipient or partial decomposition, and thus becomes fit for the food of vegetation; when drawn off for use, it is *always greatly diluted with water, and never supplied except when the plants are in a state of activity and growth*; otherwise he considers the effects would in many cases be prejudicial, rather than otherwise. It is used by him liberally to vine borders, peach trees, melons, cucumbers, pines and other fruits, with the most powerful and satisfactory results; in fact, the use of plant food in a liquid state, if properly prepared and administered, supersedes in a great degree, the necessity for manure in a solid form; and the produce in favor of the liquid greatly preponderates, being both larger in quantity and weight, richer in color, and superior in flavor.

"These advantages, however, could not be secured with certainty, unless the solution were so prepared as to suit the habits and requirements of the various plants to which it is supplied. This preparation is of two kinds:—first, by *diluting the liquid sufficiently with water* to prevent the spongioses of roots becoming glutted with too great a supply of food; and, secondly, rendering it of a proper temperature by the addition of hot water. Pines require the liquid at about a heat of 80° Fahr., and other plants in proportion; fruit trees, and other open air products, however, do not necessarily re-

quire the addition of hot water to the same extent as in-door produce, but are, notwithstanding, much benefitted by receiving it in a moderately warm state. Wherever a steam engine is employed, Sir JOSEPH PAXTON's practice of artificially warming the liquid manure, might be easily adopted, by allowing some of the waste steam to blow through the tank or pipe. Experience has, however, amply shown, that for ordinary crops, sewerage in its usual state is the most valuable manure that has yet been introduced.

"By attention chiefly to the proper administration of liquid food, and other suitable appliances, the Pine-apple, a plant formerly considered of so slow a growth as to require three years before it could produce full sized fruit, has, by Sir JOSEPH, been so hastened in its growth, as to yield, within an average of fifteen months, a far greater supply of finer fruit than was formerly produced by three years' expense and labor. From every day's experience, an instance or two out of a multitude might be cited by way of illustrating that even a much shorter period than fifteen months, is not unfrequently sufficient to accomplish all that could be desired. An ordinary sucker of a Providence Pine was detached from the old stock during the month of March, and was planted out in a prepared bed of soil in a pit, and in the following August it produced a ripe, well-grown fruit, weighing 8 lbs. Two suckers, also, of a Cayenne Pine were separated and planted out in April, and in the following September one of them produced a fruit weighing $7\frac{1}{2}$ pounds, and the other one 8 pounds. A large pit of Cayenne suckers of various sizes, were planted out in a pit last spring, and in the autumn, the fruit, when ripened, gave an average of one pound in weight, for every month the plants had grown. These were not isolated or extraordinary instances of early production, but the common and natural result of this system of culture, which stimulates to extraordinary growth, and the most perfect development. The effects of liquid manure, when applied to the roots of vines in pots, and on rafters, and to cucumbers and melons, are equally apparent; the leaves assume a rich deep color, become large and spreading, the growth is rapid and healthy, and the produce is invariably fine, plump, and becomes quickly matured."

In all this statement there is nothing except what every intelligent gardener can confirm; especially those parts printed in italics. The whole art of liquid manuring, is, in fact, comprehended in the foregoing extract.

Let the manure be extremely weak; it is idle to ask how weak; liquid manure owes its value to matters that may be applied with considerable latitude; for they are not absolute poisons, like arsenic and corrosive sublimate, but only dangerous when in a state of concentration. Gas water illustrates this sufficiently well; pour it over a plant in the caustic state in which it comes from gas works, and it takes off every

leaf, if nothing worse ensues. Mix it with half water—still it burns; double the quantity once more—it may still burn, or discolor foliage somewhat; and if it does not, much of what falls upon a plant is necessarily lost. But add a tumbler of gas-water to a bucket full of pure water, no injury whatever ensues; add two tumblers full, and still the effect is salubrious, not injurious. Hence it appears to be immaterial whether the proportion is the hundredth or the two hundredth of the fertilising material. Manuring is, in fact, a rude operation in which considerable latitude is allowable. The danger of error lies on the side of strength, not of weakness. To use liquid manure very weak, and very often, is, in fact, to imitate nature, than whom we cannot take a safer guide. This is shown by the carbonate of ammonia carried to plants in rain, which is not understood to contain, under ordinary circumstances, more than one grain of ammonia in one pound of water; so that in order to form a liquid manure of the strength of rain water, one pound of the carbonate of ammonia would have to be diluted with about 7,000 pounds weight of water, or more than three tons. Let us not be misunderstood. We do not mean to say that any such dilution as this is absolutely necessary; we only point to the very significant fact, that in the operations of nature, dilution is enormously beyond what cultivators usually dream of.

Let such manure be applied only when plants are in a growing state. In addition to Sir JOSEPH PAXTON's evidence, and to the general notoriety of this rule, may be usefully added a statement made by Mr. MITCHELL, Lord ELMERS's gardener, and quoted by the Board of Health. This experienced cultivator says—

"That he has never seen any manure produce so good a crop of strawberries as the liquid (i. e. town or sewer manure,) has this year done at the Worsley Hall gardens. Manure, he adds, 'often causes a crop of strawberries to be lost, by forcing the growth of leaves. Liquid may be applied *just when the plants are forming their flower buds*, and the strength of the manure is spent in producing fruit, not leaves. When the plants were bearing, it could be seen to a plant how far the irrigation had extended."

Indeed, it should be obvious, that since liquid manure owes its value to its being in the state in which plants can immediately consume it, to administer it when they are incapable of consuming it, that is to say, when they are not growing, is most absurd. This is, however, a point concerning which more requires to be said than we can to day find room for. *Lindley—Gard. Chronicle.*

CHINESE PLANTS.—At last the mystery of the YELLOW CAMELLIA is solved, and we may finally make up our minds that DE CANDOLLE's theory of colors is valueless. It was an ingenious idea to divide all plants between one or the other of two series; the xanthic, or yellow species, never passing into blues; and the cyanic or blue species never passing into yellow.

But the exceptions prove too many for the rule; and we must not be startled at a blue dahlia, although the Dahlia is xanthic, since we have a yellow Camellia, although the Camellia is cyanic. Mr. FORTUNE, in his very instructive work on the tea countries of China, just published, saw this remarkable variety, of which he gives the following account:

"Those who have read my 'Wanderings in China' may remember a story I told of my endeavors to find a yellow Camellia,—how I offered five dollars for one—how a Chinaman soon found two instead of one—and how he got the money and I got taken in.

"In one of these nurseries, however, I found a yellow Camellia, and it was in bloom when I bought it. It is certainly a most curious plant, although not very handsome. The flowers belong to the Anemone or Warratah class; the outer petals are of a French white, and the inner ones are of a primrose yellow. It appears to be a very distinct species in foliage, and may probably turn out more hardy than any of its race."

To all lovers of horticulture, the work from which this is an extract, is indispensable, for it abounds in interesting details respecting, not merely the novelties met with by the enterprising traveller, but many of the now common favorites in our gardens. The passages which relate to some of them cannot be brought too soon under the notice of our readers.

Of the *Funeræal Cypress* he gives the following account:

"The most beautiful tree found in this district is a species of weeping Cypress, which I had never met with in any other part of China, and which was quite new to me. It was during one of my daily rambles that I saw the first specimen. About half a mile distant from where I was, I observed a noble looking Fir tree, about 60 feet in height, having a stem as straight as the Norfolk Island Pine, and weeping branches like the Willow of St. Helena. Its branches grew at first at right angles to the main stem, then described a graceful curve upwards, and bent again at their points. From these main branches others long and slender hung down perpendicularly, and gave the whole tree a weeping and graceful form. It reminded me of some of those large and gorgeous chandeliers, sometimes seen in theatres and public halls in Europe."

The gardeners at Shanghai seem to set an example of skill which some of our own people would do well to imitate. In the midst of winter, in as bad a climate as that of London, the flower shops were gaily filled:

"I was not previously aware that the practice of forcing flowers was common in China. Many plants of *Magnolia purpurea* were in full flower; as were also many kinds of double-blossomed Peaches, the pretty little *Prunus sinensis alba*, and a variety of Camellias. But what struck me as most remarkable was the facility with which the Moutan *Pæony* had been brought

into full bloom. Several varieties of this plant were in full flower; and at this season of the year, when everything out of doors was cold and dreary, they had a most lively effect. Their blooms were tied up, to keep them from expanding too rapidly. All these things had been brought from the celebrated city of Soo-chow-foo, the great emporium of Chinese fashion and luxury.

"It may be thought that the Chinese have glass houses, hot water pipes, and all those fine things which assist gardeners and amateurs in Europe. Nothing of the kind; they do all these things in their houses and sheds, with common charcoal fires, and a quantity of straw to stop up the crevices in the doors and windows.

"At this season of the year the 'Kum-quat' (*Citrus japonica*.) which is extensively grown in pots, is literally covered with its small, oval, orange colored fruit. This as well as various other species of the orange is mixed with the forced flowers, and together produce an excellent effect. I think if the 'Kum-quat' was better known at home it would be highly prized for decorative purposes during the winter months. It is much more hardy than any other of its tribe; it produces its flowers and fruit in great abundance, and it would doubtless prove a plant of easy cultivation. In order, however, to succeed with it as well as the Chinese do, one little fact should be kept in view, namely, that all the plants of the Orange tribe which bear fruit in a small state are grafted."

Of the management of the *Chrysanthemum* we have excellent practical details:

"The method of cultivating the *Chrysanthemum* in China is as follows:—Cuttings are struck every year from the young shoots, in the same manner as we do in England. When they are rooted they are potted off at once into the pots in which they are to grow and bloom; that is, they are grown upon what would be called by our gardeners 'the one shift system.'

"The soil used in potting is of a very rich description. About Canton it is generally obtained, in the first instance, from the bottom of lakes or ponds, where the *Nelumbium* or Water Lily grows. It is then laid up to dry and pulverised for some months, when it is mixed with old night-soil taken from the manure-tanks found in every garden. A heap of this kind, after being laid up for some time and frequently turned over, is in a fit state for potting the *Chrysanthemum*. Manure water, taken also from the tanks, is liberally supplied during the growing season, and its effects are visible in luxuriant dark-green leaves which cover the plants.

"In forming the plants into nice compact bushes, which, with due deference to Chinese taste, I think much prettier than animals and 'seven-storied pagodas,' their system is as follows: The plants are trained each with a single stem; this is forced to send out numerous laterals near its base, and these are tied down in a neat and regular manner with strings of silk.

thread. By having the plants clothed with branches in this way, and by keeping the leaves in a green and healthy state, the specimens never have that bare and broom-headed appearance which they often present in England when they are taken into the green-house in winter.

"About Shanghai and Ning-po the Chrysanthemum is still better managed than it is near Canton; but the success which attends it may be attributed, partly at least, to the more favorable nature of the climate, the plant being indigenous to the central or more northern parts of the empire. The system of cultivation is nearly the same—the main points attended to being those which have been noticed, namely, choosing a rich soil, planting at once into large pots, training to a single stem, and inducing it to send out numerous laterals, and giving liberal supplies of manure water during the growing season. The Chinese are fond of having very large blooms, and, in order to obtain these, they generally pick off all the small flower buds."

Here is a graphic description of a *Cryptomeria*, from which we may judge what it ought to become among ourselves:—

"Never in my life had I seen such a view as this, so grand, so sublime. High ranges of mountains were towering on my right and on my left, while before me, as far as the eye could reach, the whole country seemed broken up into mountains and hills of all heights, with peaks of every form.

While gazing with wonder and admiration on the scene, my attention was arrested by a solitary Pine tree of great size, standing about a hundred yards from the gateway. No other trees of any size were near it. Its solitary position near the pass, and its great height and beautiful symmetry, made it appear a most striking object. 'What could it be? was it new, or did we already possess it in England?' I must confess that for a few seconds I had eyes for nothing else. Chairs, coolies, and mountains were all forgotten, and I believe, had the guard of Celestials attempted to prevent me from going into Fokien, the only boon I should asked at their hands would have been to be allowed to go and inspect this noble Pine.

The Chinese guard, however, had not the slightest intention of interfering with my movements, and, as the tree was on the roadside, I soon came up to it, and found it to be the Japan Cedar (*Cryptomeria japonica*), a tree which I had already introduced into England, and which, even in a young state, had been greatly admired there. I had never before seen such a noble specimen, and, although I would rather it had been something new, I yet felt proud of having been the means of introducing into Europe a tree of such size, symmetry, and beauty. It was at least 120 feet in height,—it might be much more,—as straight as a larch, and had its lower branches drooping to the ground. It had not been 'lopped,' like other Chinese trees, and was evidently preserved with great care. My Chinamen looked upon it with great admiration,

and informed me it was the only specimen of the kind in this part of the country, and that it had been planted by some former emperor when he crossed the mountains."

Cunninghamia lanceolata would seem to be a much finer thing than in this country it is believed to be:

"The sides of the mountains here were clothed with dense woods of the lance-leaved Pine (*Cunninghamia lanceolata*.) This was the first time I had seen this Fir tree of sufficient size to render it of value for its timber. Many of the specimens were at least 80 feet in height, and perfectly straight. There was a richness too in the appearance of its foliage which I had never seen before; sometimes it was of a deep green color, while at others it was of a bluish tint. There are, doubtless, many varieties of this tree amongst these hills."

But we must close our extracts from Mr. FORTUNE's book. Upon the main object of it, namely, the character of the Tea countries of China, and the Tea plantations of India, and upon the able manner in which the author executed a delicate and somewhat dangerous task, we shall have something to say next week.—*Gard. Chronicle*.

REAPSOBIES ABOUT ROSES.—

Old England's emblem is the Rose;

There is no other flower

With half the graces that adorn

This beauty of the bower!

And England's daughters are as fair

As any bud that blows!

What son of hers that hath not loved

Some bonny English Rose!

I blush, almost as deep a crimson as "Geant des Batailles, H. P.," when I confess that for a quarter of a century I walked "this goodly frame, the earth," with about as much appreciation of the beauties of Flora as a hippopotamus. If in childhood I had some respect for the Cowslip, it was only in anticipation of its sparkling wine; and no sooner was I promoted to port, than I coldly abandoned my former friend to its graminivorous synonyme. Pomona was the goddess of my youth: and the sacrifices which I made unto her (upon the altar of our family medicine chest) were great indeed. "*O dura puerorum ilia!*" it makes me shudder to recall how I crunched those huge green Gooseberries! Mine early manhood brought no change, though oft I gave my guineas for bouquets; and, when there was a show at Chiswick, wore raiment which defied the showers, and laughed expense to scorn. There might have been, so beautiful was my apparel, a special prize for "gent's best primrose kids," and a Banksian medal, as big as a warming pan, for the neatest, glossiest pair of patent morning boots! "Accoutred as I was," have I many a time strolled through those tented gardens, and never (for I will make a clean breast of it) never looked at a flower. Those Pinks, Carnations, Roses, and Tulips, which require the protection of a bonnet, monopolised my admiring gaze, until I

sought for "Heartcase" within my breast, but found, (oh, dash my "Bachelor's Buttons!") nothing but "Love-Lies-Bleeding!" "Have you seen the beautiful Polly-Anthus?" I was asked one day by a friend. "No," I replied, "do point her out; and may I beg you to introduce me?" Of course, he never forgot it, and had great subsequent fun at my expense in inquiring "if I wished an introduction to Mary-Gold, or Hannah-Gallie, or Miss-Embryanthemum, or John-Quil, or Bill-Bergia." • • • Thus "sans eyes, sans nose," (floriculturally) did I misspend five-and-twenty years. Then I was converted, and thus, one evening,—

"T was in the prime of summer time,
An evening calm and cool,"

I wandered to my favorite garden chair, with a cigar *de la premiere qualite*, to digest my dinner and the last new novel. There was, I remember in both, a considerable proportion of calf's head; and altogether, having left Oxford, and not being particularly in love at the time, I felt, what the author of the novel aforesaid would term, "*triste*" and "*ennuie*," doubtful of the veracity of the poet who wrote about "Home, sweet home," and, like Goldsmith's "Traveller,"—

"Remote, unfriended, melancholy, slow."

In such a mood, and resting my eyes for a moment from the wearisome trash, so liberally administered to the public at half-a-guinea a volume, something flashed before them, and I saw—A Rose! It glowed with such an intensity of vivid crimson; it shot such sparks of fire from its brilliantly scarlet centre, that I believe it was a special missionary from Flora, and that such a bloom of Rose "D'Aguesseau, Gallica," was never seen before nor since. Away went the cigar, and the still more *weedy* novel, and I stooped over the flower with all the love and enthusiasm of a neophyte. Mr. Vincent Crummles could not have felt more admiration when he first saw the future Mrs. C., as "she stood upon her head on the butt-end of a spear, surrounded by blazing fireworks!" • • • But, seriously, and passing "from gay to grave, from lively to severe," I count that hour among the happiest of my life, for I date therefrom so many of its purest pleasures; and then first I experienced that indescribable but intense feeling of reverential joy, which the true florist knows when he "looks through nature up to nature's God," and "admiring, cannot but adore." • • • The next evening found me seated as before, but my book was "Rivers on the Rose." S. R. H.—*Gard. Chronicle*.

Domestic Notices.

KIOSQUES OR SUMMER HOUSES.—(See Frontispiece.)—Having given in other numbers, sketches of summer houses, or covered garden seats, in *rustic* work—as the least expensive and most appropriate for the majority of situations, where such structures are needed in grounds, we present in our Frontispiece this month, a couple of sketches of Kiosques, from oriental gardens. In the warm climates of the East, the delight of gardens seems to be enjoyed more by looking at them from summer houses, than rambling about in them, and examining them in detail. Accordingly there is a great deal of fancy and considerable taste exercised in the East in these buildings—usually of wood, built in light and pleasing forms. The roof may be covered with canvass, stretched over a wooden frame; when well painted, this forms the most durable covering. Its surface being smoother than one of wood, it may be made ornamental by being prettily tinted in subdued and delicate shades. Summer houses, in a somewhat finished and elaborate style, like these, are better suited for the more ornate grounds of a country residence,

where there is a considerable degree of finish and keeping, than rustic arbors and summer houses. In long walks, structures of this kind afford more agreeable resting places, and, when erected in any fine points of view, they serve the double purpose of calling the attention to the best position for seeing it, and affording shade and rest while enjoying the out-stretched landscape. In all buildings of this kind, the design should be rather simple than complex, and the roof-outline is one which should receive most attention—particularly if the building is seen from any distance. These two sketches of oriental kiosques, may serve as useful hints to our readers, about constructing such decorations in their grounds.

SEEDLING FOREIGN GRAPE.—We received on the 12th of June, in excellent order, from JOHN FISK ALLEN, Esq., of Salem, Mass., some fine samples of forced grapes, and among the rest a new seedling originated by him. This seedling, a cross between the Grizzly Frontignan and the Verdelto, is very rich in flavor, resembling

most nearly the Grizzly Frontignan—but quite distinct from that variety. The cluster is not large—but compact and well formed—the berries round, of medium size, white, tinged with gray-rose. Its fine flavor will be appreciated by those who like the Muscat flavor, and if this new sort, which has not yet been fairly tested, fulfills the promise it holds out, it will, we think, be found a decided acquisition for the vineyard.

The Black Hamburgs which accompanied the above, were very finely colored, and of the finest possible flavor.

GREEN CROPS AS MANURE.—We believe the majority of agricultural writers agree upon the advantage of ploughing-in green crops as manure on exhausted lands, and it has long been practiced as one of the cheapest and best modes, under given circumstances, of accomplishing that result.

We have been not a little surprised, therefore, to find in an agricultural address delivered by Mr. GOWAN, of Mt. Airy, near Philadelphia, such views as the following:

"There is another remark, however it may conflict with pre-conceived opinion, or established usage, which a sense of duty compels me to make; and that is, of all the time-wasting, land-cheating practices, none is more to be deprecated than that of turning-in green crops, as a succedaneum for manure. In whatever place this is practiced, however strong the land may be at the start, the system, if persevered in, must inevitably bring the land, its owners, and the country, into a state of poverty. No good husbandman would think of pursuing such a course. Think of the time lost in preparing the ground for a crop, seeding it, and then, instead of allowing it to mature, to be gathered to the barn, ploughing it under, to serve as manure to the land on which it was raised. Manure, indeed! To call the acidulated water, which the decomposition of partly grown clover, buckwheat, &c., produces, manure, would be a misnomer—the calling of a thing by the wrong name. . . . If the turning-in, year after year, scant crops of clover and the like, be persisted in, the land so treated must, in a brief period, become not only destitute of vegetable mold, but of every other organic ingredient necessary to fertility."

If Mr. GOWAN goes on at this rate, he will demonstrate that there is no warmth begotten by sunshine! Does Mr. G. happen to have heard that one of the premium farms in the state of New-York—that of Mr. D. D. T. MORE, of Watervliet—185 acres, was purchased by Mr.

M. five years ago, and was, according to the affidavits made to the society, so poor at that time, that the only crop Mr. M. could then raise on it was *white beans*, and that without capital, and simply by good management, Mr. M. has not only brought this farm to the highest condition, but made it produce a net profit of \$2,678 per year. How was this poor worn-out farm restored? We give Mr. MORE's own words: "I found the best mode of improving my land was by *ploughing under green clover*, the growth of the clover being aided by a liberal application of plaster—say 250 lbs. to the acre."

Having had a glimpse of Mr. MORE's farm, and being able to certify from that glimpse, that he is a master farmer, and no quack, we commend his practice to Mr. GOWAN, confident that Mr. MORE's practice, well understood and practiced by American "skimmers," would fill their pockets with "yellow boys," rather than their soil with "acidulated water."

BRITISH QUEEN STRAWBERRIES.—Much the finest flavored and most beautiful large strawberries, that we have seen grown in this country, are some of this variety, raised this season by our neighbor, Dr. HULL of Newburgh. The color is darker, and they appear to have attained a perfection of quality never reached in England—where this superb sort is so justly popular. The crop is also one that would satisfy Mr. LONGWORTH—much as he has abused the staminate for their barrenness. We will give some account of Dr. HULL's culture of this delicious amateur's variety in our next.

GOOSEBERRIES WITH TAN-BARK.—Dear Sir: You have said much about the benefits of covering strawberry beds with tan-bark. I have made an experiment with mulching gooseberry beds with the same substance, and so far as one year's experience is worth anything, I am well satisfied with it. The great difficulty with the gooseberry here, seems to be with the heat and want of moisture. My bushes are planted in quarters 8½ feet apart each way—trained to single stems. I have hitherto lost quite half the crop by mildew. Early last November, after pruning the plants and dressing the borders—digging in plenty of stable manure, I hauled several loads of tan with my team, and spread it, uniformly, all over the bed, 6 inches thick.

There it remained all winter, and still remains. The foliage of the bushes is more healthy than I ever saw it before—the fruit is almost entirely clear and very large and promising. If this is worth publishing, it is at your service. *A. C. New-York, June 10, 1852.*

PEAR BLIGHT.—Mr. ERNST's views (given in another part of this number,) and our own, on the subject of pear blight, are substantially the same, and we therefore look to Prof. TURNER for further proofs of the insect origin of the disease. Any one who will compare the health and hardiness of the pear tree on the eastern shore of Maryland—where the climate is extremely uniform as compared with the western states, will find satisfactory reasons for the great prevalence of blight at the west—a country with over fertile soil and the greatest extremes of temperature.

Our own opinion, expressed before, is that the pear tree will never be thoroughly acclimated in the west, till a race of *seedlings* is originated in the valley of the Mississippi—which seedlings, by the very circumstance of their origin, are as much better adapted to those rich bottoms and prairies as the Hoosiers and Buckeyes are better adapted than Yorkshiremen or the natives of Bordeaux.

SALE OF FINE BLOODED CATTLE.—On referring to our advertising columns, our readers will observe that Mr. LEWIS F. ALLEN, of Black-Rock, is to have a sale of his high bred cattle in August next. This is by far the largest herd of blood stock ever offered in the United States; and from Mr. ALLEN's long experience in breeding, and good taste in selection, we have no doubt the most fastidious admirers of fine cattle will find something in this herd to meet their tastes, as well as to gratify their demands in the dairy qualities of the cows.

No creature can be more ornamental in a park, lawn, or pasture, than a high-bred, beautiful, and useful cow; and no country place of any pretension to character, should be without one or more of them. The sale is to take place in this immediate vicinity, and it will be a rare object of attraction to all who love to look at fine stock, and convenient of access to those who wish to purchase.

NEW TEA ROSE.—Having recently become a

subscriber to the "Horticulturist," and perceiving from its pages the uniform courtesy with which you respond to the communications of your correspondents, I have taken the liberty of forwarding, by *this mail*, to your address, a rooted cutting of a *Seedling Tea Rose* (from "*Pactole*") requesting the favor of your opinion of its merits after it has bloomed.

The flower is good medium size, not *full* double (averaging about 30 petals,) neither is it very handsome when fully blown—the flowers being pendulous, and the petals like most others of its class becoming more or less placid from a full exposure to the scorching rays of our summer sun. The opening or half expanded bud, however, is remarkably beautiful, and in a bouquet of my choicest roses, invariably attracts attention, both on account of its graceful form and striking color—the whole flower being of a *deeper* and *purer yellow*, than any other ever blooming rose, with which I am acquainted—I may add that as the plant increases in size, the flowers which are very fragrant, become deeper in color and more double than when it is smaller. The original plant is but two years from the seed, and has proved a most abundant bloomer—and one specimen in particular, budded last May, on a strong stock, three feet from the ground, has assumed a beautiful weeping habit, and is much admired.

Among my other seedlings is one of remarkable vigor, which shows an abundance of very large and handsome buds, not *one* of which has ever opened; the foot stalk withering just below the bud, which promises, however, to be very double, as I counted over 70 *petals* in the last which dropped.

It was raised in very rich soil, and though I have since removed it to a poorer spot, no improvement has, at least as yet, appeared. If your experience can suggest any remedy, I would be much gratified to hear from you through the "Horticulturist;" also be pleased to state whether you have received the plant now sent.

I have named the *yellow* seedling, "*Christiana*," and wish the name to be retained, if it should ever be considered worthy of being propagated for sale.

This is the only cutting which I have parted with, and the last that I have heard your opin-

lon. J. M. S. Kenansville, N. C., May 19, 1862.

The plant reached us in excellent order, and is now growing in our garden. We fear the failure to open the buds is a constitutional defect in the variety, which will always remain so—but it is possible that change of soil will modify it. We will report our success to J. M. S. Ed.

Notices of Societies.

Albany and Rensselaer Hort. Society.

There was a fine display of fruits, vegetables, flowers, and plants, at the Agricultural Rooms, on the 22d ult. The fruits were confined, of course, to those of the season, such as Strawberries, Cherries, Gooseberries, Currants, &c. There were but two kinds of Cherries, the Mayduke and Seedling, by Mr. Kirtland of Greenbush. Of Strawberries, Mr. R. exhibited 10 varieties: Mr. John S. Gould, of this city, had 17 varieties, and Mr. C. P. Williams 7.

Messrs. Jas. Wilson, L. Menand, E. Corning, Jr., Joel Rathbone, Wm. Newcomb, V. P. Douw, C. P. Williams, Mrs. Chaffee, Mrs. Van Namee, Pittstown, Rensselaer co., and W. Jones, Bethlehem, exhibited some of the finest specimens of green-house plants ever seen.

Messrs. V. P. Douw, Jefferson Mayell, and Joel Rathbone exhibited some fine green peas. Mr. Douw had four varieties of cauliflower. Messrs. Rathbone and Douw of this city, and Miller of Hudson, exhibited cucumbers of rare varieties. Messrs. Douw and Hutson showed fine specimens of lettuce, cabbage, and pie plant.

Altogether, the display reflected much credit upon all the exhibitors. These exhibitions should elicit a more general interest than seems to be awarded them. There will be another exhibition in a fortnight, when we hope there will be a larger attendance of our citizens present.—*Atlas*.

Pennsylvania Hort. Society.

The stated meeting of this society was held in its hall in Philadelphia, June 15, 1862. Dr. W. D. Brinckle, V. P., in the chair. The exhibition was excellent, consisting of four large contributions of green house plants, an extensive display of strawberries and cherries; and two long tables of forced vegetables. The collection of plants from Caleb Cope's contained some thirty choice specimens—a fine well grown specimen of Cuphea platycentra, a large Agapanthus umbellatus, Lobelia racemosa a new plant, Gongora maculata, Fuchsia in variety, select Verbenas, Geraniums, etc.; also another cut flower of the famed Victoria regia, and many of the night blooming Cereus. Frederick Lennig's—a fine plant of Allamanda cathartica, Clerodendrum Devonianse, Cyrtoceras reflexa, Begonias, Hydrangeas, Achimenes, Gloxinias in all about two dozen specimens. Robert Buist's had many choice fancy Geraniums, fine Fuchsias, Petunias, Ixora, Angelonia, Rondeletia, together, nearly 30 plants. Peter Rabab's table contained numerous seedling Verbenas, remarkably fine and choice. The Floral designs, baskets, and bouquets by John Miller, gardener to J. S. Lovering, Thomas Meehan, gardener to C. Cope, Robert Kilvington and others, were very showy. The Fruits, however, were the attraction, and provokingly tempting—the display of strawberries from Joseph S. Lovering's has not been surpassed on any former occasion, and were of the Iowa, Burr's Pine, Keene's and Hovey's Seedlings; from Gerhard Schmitz, another seedling of great merit, fine in flavor, large in size and rich in depth of color, which he has named the "Pennsylvania,"—from C. Cope's fine Hovey's Cherries—from James Bissel, gardener to Jas. Dundas, from Isaac B. Baxter, Mrs. J. B. Smith, and T. P. James, the May Duke, and Robert Cornelius the Bleeding-Heart variety. The tables of vegetables were from C. Cope's and Robert Cornelius' gardens.

On motion ordered that seven delegates be appointed to the "National Agricultural Convention," about to convene at the city of Washington, and the chair appointed David Landreth, Dr. Robert Hare, J. Price Wetherill, R. R. Scott, Clayton B. Rogers, Thomas Hancock, and Thomas Meehan. Thos. F. JAMES, Rec. Sec.

Buffalo Hort. Society.

April 6.—The New-York State Agricultural Society having appointed a time for holding their Fair which would conflict with the Society's annual exhibition, it was determined to change the time of holding the latter to the 2d and 3d of September. Adjourned.

May 4.—Prizes were awarded to Mason and Lovering for a display of pot plants, \$3, and for lettuce, \$1.

May 18.—Prizes were awarded,
For the best six varieties pines, to A. H. Bryant, \$1 00
do three bunches asparagus, L. Eaton, 2 00
do 12 stalks rhubarb, Bryant & Son, 1 00

June 1.—Exhibited by Mrs. Vandeventer—apples, Northern Spy. Mrs. L. Eaton, tulips—10 varieties. Mrs. H. Shumway, Jonquils. Mason & Lovering, Cactus Ackermannia, Epiphyllum Jenkinsii, Cereus speciosissimus in pots. Tulips, 50 varieties. Two bouquets of Roses, Geraniums, Verbenas, Heliotropes, Euphorbias, &c. A. Bryant & Son—Tulips, 30 varieties—Paeonies, 4 varieties, Spirea prunifolia, Lily of the Valley, Snowdrops, Pyrus japonica, &c. Asparagus, 3 bunches—Rhubarb, 4 varieties.

The prize for the best 10 varieties Tulips, was divided between Mrs. Eaton and Messrs. Mason and Lovering. The secretary was directed to procure suitable signs to be used on days of holding meetings and exhibitions.

The Northern Spy Apples shown by Mrs. Vandeventer were tested, and found to be perfectly sound, full of richness, aroma, and high flavor—and the society was unanimous in esteeming it the very best late keeping apple. Adjourned. JOHN B. EATON, Rec. Secretary.

Genesee Valley Hort. Society at Rochester.

The third weekly display of the Genesee Valley Horticultural Society, took place on the 26th of May. The varieties of flowers increase with the advance of the season, and a fine show was made.

Ellwanger & Barry exhibited a large number of green-house plants and cut flowers—among them 9 varieties Cinerarias, 7 of Calceolarias, 7 of Roses, 9 of Lilies, 6 Berberies, 5 Spireas, 7 Paeonias, fine collections of Double, Parrot, and Bicolor Tulips, and a great variety of other plants and flowers.

Frost & Co., fine selections of Hybrid Perpetuals, Noisette and China Roses, 20 varieties of Verbenas, cut flowers, &c.

Wm. King—50 varieties Tulips, 20 of Paeonies, 17 of Calceolarias, Fuchsias, Cinerarias, &c.

Wm. Webster—Pelargoniums, Fuchsias, Verbenas, 11 seedling Calceolarias, &c.

Mrs. John Williams exhibited 36 varieties of Tulips.

Mrs. Jewell—24 varieties Tulips.

John Donnellan—24 varieties Tulips.

Leander Wetherill—20 varieties Wild Flowers.

John Donnellan and C. F. Crossman, their usual varieties of choice vegetables.

Moses Long, M. D., and Mr. Chitchell, had fine specimens of late keeping apples.

Among the rare flowers, none were more admired than the Calceolarias and "Hovey's America" Verbenas, shown by Mr. Webster. J. H. WATTS, Sec'y.

Rochester, June 5, 1862.

Oswego Hort. Society.

The annual meeting of this society for the year 1862, was held on Wednesday evening Jan. 21. The following officers were duly elected for the ensuing year.

President—Hon. Enoch B. Talcott.

Vice-Presidents—G. W. Bart, A. C. Mattoon, P. F. Parsons, H. Matthews, R. H. Martin.

Rec. Secretary—J. C. Churchhill.

Cor. Secretary—J. M. Casey.

Librarian—Asa Parks.

Treasurer—S. H. Lathrop.

Executive Committee—J. L. McWhorter, John Still, G. Mollison, J. W. Judson, and George Seeley.
J. M. CASKY, Cor. Secretary.

Oswego, June 12, 1852.

New-York Horticultural Society.

The first semi-annual exhibition of this Society took place at Metropolitan Hall, June 9, 10, and 11. A hasty glance at the exhibition, the first day, enabled us to see that it was by far the best of the kind for many years in New-York, and we argue good results from it for the future success of the society. The display of plants in pots was particularly good—the geraniums and Verbenas being well grown. The "observed of all observers," was the *Victoria regia*, specimens sent by Mr. CORN of Philadelphia, and admirably displayed in a large tank or basin of water occupying the centre of the exhibition room. Its gigantic size was finely set off by comparison with the lovely white water lily of our ponds, in full bloom, in the same tank.

We had hoped to receive a full account of the show from the Secretary—but it has not reached us in time for this number. The attendance of visitors was very large and the exhibition went off with most encouraging eclat.

Louisville (Ky.) Hort. Society.

THE STRAWBERRY SHOW.—We called in at the store of A. G. Munn & Co., on Saturday, to examine the display of Strawberries exhibited as the first weekly show for the season, held under the auspices of the Kentucky Horticultural Society. There was quite a spirited competition among contributors, and in the exhibition some 12 or more varieties were represented. Ornishy Hite, Esq., displayed a basket of the Black Prince, which we thought very fine. W. L. Green exhibited a beautifully colored basket of what he termed Carolina Pines. Mr. James Orr had the British Queen, and one other variety, both of which appeared to be well grown. A. G. Munn, Esq., exhibited quite a number of varieties, and among them several that were superb. His Black Prince, Boston Pine and Burrs' New Pine, would have been hard to beat in any Strawberry community. John Thutcher, Esq., also exhibited a single plate of the Black Prince, not inferior to any upon the society's tables in appearance, and we rather thought the berries larger than those of any other contributor of the same kind. Mr. Edward Wilson, as usual represented Flora on this occasion, gracing the tables with a fine bouquet of cut flowers. There was but one contributor of vegetables, Mr. P. Birkenmayer. But his display was highly creditable to his skill as a grower. His specimens of asparagus were very large, and, although we have seen heads of the cauliflower of greater size than that exhibited by him, still we think the fastidious taste of Dr. Johnson himself, who thought the cauliflower "the fairest of all flowers," could scarcely have desired firmer or more compact heads, or heads more perfectly white.—*Louisville Journal*.

Bangor Horticultural Society.

At the annual meeting of the Society, held on the 20th May, the following officers were elected, viz:—

President—Henry Little.
Vice-President—Cyrus Goss.
Secretary—Albert W. Paine.
Cor. Secretary—I. D. Bartlett.
Treasurer—Albert W. Paine.
Executive Committee—John S. Ayer, B. F. Nourse, and Albert Noyes.
Committee on Fruits—B. F. Nourse, Albert Emerson, Albert Noyes, Walter Goodale, and J. W. Chapman.
On Ornamental Trees—I. D. Bartlett, G. K. Jewett, and J. B. Wheelwright.
On Vegetables—J. S. Sayward, Thos. Beacroft, J. W. Carr, E. French, and C. B. Abbot.
On Flowers—I. D. Bartlett, B. F. Nourse, and A. Noyes.

The Treasurer's report was offered and accepted, showing funds in the treasury to the amount of \$106.03.

I. D. Bartlett was invited to deliver the annual address at the next annual exhibition.

Voted, That the Society hold monthly exhibitions, at the discretion of the Executive Committee, at such times

and places as they may appoint, in addition to the annual exhibition.

Voted, That the Executive Committee be authorized to solicit subscriptions for the erection of a suitable Hall for the use of the Society. ALBERT W. PAINE, Sec'y.

Answers to Correspondents.

GRAFTING EVERGREENS.—*A Subscriber, (Newton, Mass.)* The French nurserymen are very successful in grafting evergreens, and practice it as follows: "the proper time for grafting pines, is when the young shoots have made about three-quarters of their length, and are still so herbaceous as to break like a shoot of asparagus. The shoot of the stock is then broken off about two inches below its terminal bud; the leaves are stripped off from 20 to 24 lines down from the extremity, leaving, however, two pairs of leaves opposite and close to the upper end of the shoot so headed back—which leaves are of great importance for drawing up the sap. The shoot or stock is then split to the depth of two inches, with a very thin knife, between the two pairs of leaves left; the scion is then prepared—the lower part being stripped of its leaves to the length of two inches, and is then cut to a wedge and inserted, in the ordinary mode of cleft grafting. The graft is tied with a slip of woolen, and a cap of paper is fastened to a stake, and firmly fixed over the whole graft, to protect it from the sun and rain. At the end of 15 days this cap is removed, and the ligature at the end of a month." Some evergreens, grafted in this way, make a second growth of five or six inches the first year—but most sorts do not start till the next year.

BOOKS.—*H. M., (Pittsburgh, Pa.)* The work on Fruits will be entirely remodelled this season, and all new varieties and improvements added. *J. (Baltimore.)* Lindley's Horticulture is precisely the book you need—no one who will study the principles laid down in it, can be an ignorant gardener.

HEATHS. *A Tyro, (New-Bedford.)* The difficulty which many complain of in growing heaths in this country, is in the hot and dry summer climate. The roots of all heaths are impatient of extreme dryness. The most successful grower of heaths in America, is Mr. REECKENBROCK, the superintendent of the exotic plants at Washington. He keeps his heaths

in summer, in a hot-bed frame, the glass raised about six inches at the north end, and the transparency dulled by a coat of whiting, or white-wash, on the under side. In this way the heaths are kept shaded—are not subject to be burned up by the heat, being in a cool and uniform condition of the atmosphere. His bloom of heaths in February, is worth a journey to Washington from any part of the Union, to see—and it shows how an intelligent cultivator can modify his practice so as to grow plants in a climate naturally very much against them.

CATERPILLARS.—*M. Miles*, (Philadelphia.) Tie a sponge on the end of a long rod or pole; fill a pail half full of soft-soap, with just water enough to make it liquid; dip the sponge in it, and turn it around in the nest of the caterpillars. It should be applied just after sundown, and will finish the business of each nest very speedily.

BUDDING ROSES.—*Esther*, (Lancaster.) Commence budding roses immediately. The Prairie roses will take any of the everblooming sorts—but the hardier kinds of Bourbons, such as *Madam Desprez*, *Gen. Dubourg*, *Souvenir de Malmaison*, &c., are the best. If the plants are growing in a situation exposed to the sun, you will have to tie some *shade*, in the shape of matting, straw, or branches of evergreens, over the budded portion in winter to prevent injury by the sun. If growing on the north side of a building or fence, it will not be necessary. *A Lady*. If you wish continual bloom on your monthly rose beds—never allow any seeds to grow—cut off the hips as fast as they form, and peg down any long shoots that run up. This will force up new shoots, and along with these new flowers. You can hardly make the beds of everblooming roses too rich in this climate, where fully exposed—the more growth, the more bloom—especially if the soil is deep.

TRANSPLANTING.—*A Vermont Subscriber*. You would have saved all your trees if you had headed them in well when you planted them. It is folly to expect to maintain a large head, when the roots have been mutilated and cut short. If it were made a rule in moving trees,

always to reduce the last year's growth to one bud, half the failures in transplanting would not occur—because the head and the roots would be at once brought to something like a balance of power. Shortening-in and mulching transplanted trees ought to be followed as established practical rules, in this climate, in transplanting every deciduous tree needing more care than a willow.

VERBENAS.—*A Novice*, (Bethlehem, Pa.) Your young plants damp off in your pit in winter, because they are not well rooted, and are too tender in the stalks. If you strike cuttings in July, instead of September, they will not only get well rooted, but the stems will become firm and woody, and will resist a good deal of cold and damp without injury.

APPLE-ORCHARDS.—*Jamstown*. A paint of very thin soft soap, is far better for the bark of trees than whitewash, because it actually kills all insects and their eggs in the crevices of the bark, and because its good effects continue through the whole season instead of ending as soon as it becomes dry.

STANWICK NECTARINE.—*G. E. French*, (Alexandria, La.) We believe the Messrs. PARSONS of Flushing, N. Y., are cultivating this variety.

CYPRESS VINE.—*Julia*. (Northampton, Mass.) Only one thing is needful to make this annual vegetate freely, and so far as we know nothing else will, viz: to soak the seeds over night in *milk*—blood-warm when the seeds are put in it. Warm water will not answer.

APRICOTS.—*B.* (Cincinnati.) You will never succeed with the trees planted in a warm southern aspect. Plant others in a due north exposure where they have no sun from 10 to 4 and they will do finely. Buda and large Early are the surest and best sorts.

GARDEN WALKS.—The growth of weeds in gravel walks has been securely prevented, by forming a solid bottom beneath the gravel, of marl and coarse gravel or small stones, rammed down hard, and through which no weeds nor grass can penetrate.



Church in the Lombard Style.

THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE

Shade Trees in Cities.

“DOWN with the Ailanthus!” is the cry we hear on all sides, town and country, —now that this “tree of heaven,” (as the catalogues used alluringly to call it,) has penetrated all parts of the union, and begins to show its true character. Down with the Ailanthus! “Its blossoms smell so disagreeably that my family are made ill by it,” says an old resident on one of the squares in New-York, where it is the only shade for fifty contiguous houses. “We must positively go to Newport, papa, to escape these horrible Ailanthuses,” exclaim numberless young ladies, who find that even their best *Jean Maria Farina*, affords no permanent relief, since their front parlors have become so celestially embowered. “The vile tree comes up all over my garden,” say fifty owners of suburban lots who have foolishly been tempted into bordering the outside of their “yards” with it—having been told that it grows so “surprising fast.” “It has ruined my lawn for fifty feet all round each tree,” say the country gentlemen, who, seduced by the oriental beauty of its foliage, have also been busy for years dotting it in open places, here and there, in their pleasure grounds. In some of the cities southward, the authorities, taking the matter more seriously, have voted the entire downfall of the whole species, and the Herods who wield the besom of sylvan destruction, have probably made a clean sweep of the first-born of celestials, in more towns than one south of Mason and Dixon’s line, this season.

Although we think there is picturesqueness in the free and luxuriant foliage of the Ailanthus, we shall see its downfall without a word to save it. We look upon it as an usurper in rather bad *odor* at home, which has come over to this land of liberty, under the garb of utility* to make foul the air, with its pestilent breath, and devour the soil, with its intermeddling roots—a tree that has the fair outside and the treacherous heart of the Asiatics, and that has played us so many tricks, that we find we

* The Ailanthus though originally from China, was first introduced into this country from Europe, as the “Tanner’s Sumac”—but the mistake was soon discovered, and its rapid growth made it a favorite with planters.

have caught a Tartar which it requires something more than a Chinese wall to confine within limits.

Down with the *Ailanthus*! therefore, we cry with the populace. But we have reasons beside theirs, and now that the favorite has fallen out of favor with the sovereigns, we may take the opportunity to preach a funeral sermon over its remains that shall not, like so many funeral sermons, be a bath of oblivion-waters to wash out all memory of its vices. For if the Tartar is not laid violent hands upon, and kept under close watch, even after the spirit has gone out of the old trunk, and the coroner is satisfied that he has come to a violent end—lo, we shall have him upon us tenfold in the shape of suckers innumerable—little Tartars that will beget a new dynasty, and overrun our grounds and gardens again, without mercy.

The vices of the *Ailanthus*—the incurable vices of the by-gone favorite—then, are two-fold. In the first place it *smells horribly*, both in leaf and flower—and instead of sweetening and purifying the air, fills it with a heavy, sickening odor;* in the second place it *suckers* abominably, and thereby over runs, appropriates and reduces to beggary, all the soil of every open piece of ground where it is planted. These are the mortifications which every body feels sooner or later, who has been seduced by the luxuriant outstretched welcome of its smooth round arms, and the waving and beckoning of its graceful plumes, into giving it a place in their home circle. For a few years, while the tree is growing, it has, to be sure, a fair and specious look. You feel almost, as you look at its round trunk shooting up as straight, and almost as fast as a rocket, crowned by such a luxuriant tuft of verdure, that you have got a young palm tree before your door, that can whisper tales to you in the evening of that "Flowery Country" from whence you have borrowed it, and you swear to stand by it against all slanderous aspersions. But alas! you are greener in your experience than the Tartar in his leaves. A few years pass by; the sapling becomes a tree—its blossoms fill the air with something that looks like curry-powder, and smells like the plague. You shut down the windows to keep out the *unbalm*y June air, if you live in town, and invariably give a wide berth to the *heavenly* avenue, if you belong to the country.

But we confess openly, that our crowning objection to this petted Chinaman or Tartar, who has played us so falsely, is a patriotic objection. It is that he has drawn away our attention from our own more noble native American trees, to waste it on this miserable pigtail of an Indianman. What should we think of the Italians, if they should forswear their own orange trees and figs, pomegranates and citrons, and plant their streets and gardens with the poison sumac tree of our swamps? And what must at an European arboriculturist think, who travels in America, delighted and astonished the beauty of our varied and exhaustless forests—the richest in the temperate zone, to see that we neither value nor plant them, but fill our lawns and avenues with the cast off nuisances of the gardens of Asia and Europe.

And while in the vein, we would include in the same category another less fashionable but still much petted foreigner that has settled among us with a good letter of cred-

* Two acquaintances of ours, in a house in the upper part of New-York, are regularly driven out by the *Ailanthus* malaria every season.

it, but who deserves not his success. We mean the Abele or Silver poplar. There is a pleasant flutter in his silver lined leaves—but when the timber is a foot thick, you shall find the air unpleasantly filled every spring, with the fine white down which flies from the blossom, while the suckers which are thrown up from the roots of old *Abeles* are a pest to all grounds and gardens, even worse than those of the *Ailanthus*. Down with the Abeles!

Oh, that our tree planters, and they are an army of hundreds of thousands in this country—ever increasing with the growth of good taste—oh! that they knew and could understand the surpassing beauty of our *native shade trees*. More than forty species of Oak are there in North America, (Great Britain has only two species—France only five,) and we are richer in Maples, Elms, and Ashes, than any country in the old world. Tulip trees and Magnolias from America, are the exotic glories of the princely grounds of Europe. But, (saving always the praiseworthy partiality in New-England, for our Elms and Maples,) who plants an American tree—in America? And who, on the contrary, that has planted shade trees at all in the United States, for the last fifteen years, has not planted either *Ailanthuses* or Abele Poplars? We should like to see that discreet, sagacious individual, who has escaped the national extasy for foreign suckers. If he can be found, he is more deserving a gold medal from our horticultural societies, than the grower of the most mammoth pumpkin, or elephantine beet that will garnish the cornucopia of Pomona for 1852.

In this confession of our sins of commission in planting filthy suckers, and omission in not planting clean natives—we must lay part of the burden at the door of the nurserymen. (It has been found a convenient practice—this shifting the responsibility—ever since the first trouble about trees in the garden of Eden.)

"Well! then, if the nurserymen *will* raise *Ailanthus* and Abeles by the thousands, (reply the planting community,) and telling us nothing about pestilential odors and suckers, tell us a great deal about 'rapid growth, immediate effect—beauty of foliage—rare foreign trees,' and the like, it is not surprising that we plant what turn out, after twenty years trial, to be nuisances instead of embellishments. It is the business of the nurseryman to supply planters with the best trees. If they supply us with the worst, who sins the most, the buyer or the seller of such stuff?"

Softly, good friends. It is the *business* of nurserymen to make a profit by raising trees. If you will pay just as much for a poor tree, that can be raised in two years from a sucker, as a valuable tree that requires four or five years, do you wonder that the nurserymen will raise and sell you *Ailanthuses* instead of Oaks. It is the business (duty, at least) of the planter, to know what he is about to plant, and though there are many honest traders, it is a good maxim that the Turks have, "ask no one in the bazaar to praise his own goods." To the eyes of the nurserymen a crop of *Ailanthuses* and Abeles is "a pasture in the valley of sweet waters." But go to an old homestead, where they have become naturalized, and you will find that there is a bitter aftertaste about the experience of the unfortunate possessor of these sylvan treasures of a far off country.*

* We may as well add for the benefit of the novice, the advice to shun all trees that are universally propagated by suckers. It is a worse inheritance for a tree than drunkenness for a child, and more difficult to eradicate. Even *Ailanthuses* and Poplars from seed have tolerably respectable habits as regards radical things.

The planting intelligence must therefore increase if we would fill our grounds and shade our streets with really valuable, ornamental trees. The nurserymen will naturally raise what is in demand, and if but ten customers offer in five years for the Overcup Oak, while fifty come, of a day, for the *Ailanthus*—the latter will be cultivated as a matter of course.

The question immediately arises, what shall we use instead of the condemned trees? What especially shall we use in the streets of cities! Many—nay the majority of shade trees—clean and beautiful in the country—are so infested with worms and insects in towns as to be worse than useless. The *Sycamore* has failed, the *Linden* is devoured, the *Elm* is preyed upon by insects. We have rushed into the arms of the *Tartar*, partly out of fright, to escape the armies of caterpillars and cankerworms that have taken possession of better trees!

Take refuge, friends, in the *American Maples*. Clean, sweet, cool, and umbrageous, are the Maples; and, much vaunted as *Ailanthuses* and *Poplars* are, for their lightning growth, take our word for it that it is only a good go off at the start. A Maple at twenty years—or even at ten, if the soil is favorable, will be much the finer and larger tree. No tree transplants more readily—none adapts itself more easily to the soil, than the Maple. For light soils, and the milder parts of the Union, say the middle and western states, the *Silver Maple*, with drooping branches, is at once the best and the most graceful of street trees. For the north and east, the *Soft Maple* and the *Sugar Maple*. If any one wishes to know the glory and beauty of the *Sugar Maple* as a street tree, let him make a pilgrimage to Stockbridge, in Massachusetts! If he desires to study the *Silver Maple*, there is no better school than Burlington, N. J. These are two towns almost wholly planted with these American trees—the sylvan adornings of which any “native” may well be proud. The inhabitants neither have to abandon their front rooms from “the smell,” nor lose the use of their back yards by “the suckers.” And whoever plants either of these three maples, may feel sure that he is earning the thanks instead of the reproaches of posterity.

The most beautiful and stately of all trees for an avenue—and especially for an avenue street in town—is an American tree that one rarely sees planted in America*—never, that we remember, in any public street. We mean the *Tulip Tree*, or *Liriodendron*. What can be more beautiful than its trunk—finely proportioned, and smooth as a Grecian column? What more artistic than its leaf, cut like an arabesque in a Moorish palace—what more clean and lustrous than its tufts of foliage—dark green, and rich as deepest emerald? What more lily-like and specious than its blossoms—golden and bronze shaded? and what fairer and more queenly than its whole figure, stately and regal as that of ZENOBIÆ? For a park tree, to spread on every side, it is unrivalled, growing a hundred and thirty feet high, and spreading into the finest symmetry of outline.† For a street tree, its columnar stem, beautiful either with or without branches—with a low head or a high head—foliage over

* Though there are grand avenues of it in the royal parks of Germany—raised from American seeds.

† At Wakefield—the fine country seat of the FISHER family, near Philadelphia, are several tulip trees on the lawn, over 100 feet high, and three to six feet in diameter.

the second story or under it—is precisely what is most needed. A very spreading tree, like the Elm, is always somewhat out of place in town, because its natural habit is to extend itself laterally. A tree with the habit of the Tulip, lifts itself into the finest pyramids of foliage, exactly suited to the usual width of town streets—and thus embellishes and shades without darkening and encumbering them. Besides this, the foliage of the Tulip tree is as clean and fresh at all times, as the bonnet of a fair young quakeress, and no insect mars the purity of its rich foliage.

We know very well that the Tulip tree is considered difficult to transplant. It is, the gardeners will tell you, much easier to plant *Ailanthuses*, or, if you prefer, Maples. Exactly, so it is easier to walk than to dance—but as all people who wish to be graceful in their gait learn to dance (if they can get an opportunity,) so all planters who wish a peculiarly elegant tree, will learn how to plant the *Liriodendron*. In the first place the soil must be light and rich—better than is at all necessary for the Maples—and if it *cannot* be made light and rich, then the planter must confine himself to Maples. Next, the tree must be transplanted just about the time of commencing its growth in the spring, and the roots must be cut as little as possible, and *not suffered to get dry* till replanted.

There is one point which, if attended to as it is in nurseries abroad, would render the tulip tree as easily transplanted as a maple or a poplar. We mean the practice of cutting round the tree every year in the nursery till it is removed. This develops a ball of fibres, and so prepares the tree for the removal that it feels no shock at all.* Nurserymen could well afford to grow Tulip trees to the size suitable for street planting, and have them twice cut or removed before hand, so as to enable them to warrant their growth in any good soil, for a dollar a piece. (And we believe the average price at which the thousands of noisome *Ailanthus* that now infest our streets, have been sold is above a dollar.) No buyer pays so much and so willingly, as the citizen who has only one lot front, and five dollars each has been no uncommon price in New-York for “trees of heaven.”

After our nurserymen have practiced awhile this preparation of the Tulip trees for the streets by previous removals, they will gradually find a demand for the finer oaks, beeches, and other trees now considered difficult to transplant for the same cause—and about which there is no difficulty at all, if this precaution is taken. Any body can catch “suckers” in a still pond, but a trout must be tickled with dainty bait. Yet true sportsmen do not, for this reason, prefer angling with worms about the margin of stagnant pools, when they can whip the gold spangled beauties out of swift streams with a little skill and preparation, and we trust that in future no true lover of trees will plant “suckers” to torment his future days and sight, when he may, with a little more pains, have the satisfaction of enjoying the shade of the freshest and comliest of American forest trees.

* In many continental nurseries, this annual preparation in the nursery, takes place until fruit trees of bearing size can be removed without the slightest injury to the crop of the same year.

THE CURCULIO WARFARE—A SUCCESSFUL BATTLE.

BY WM. STOKES, WEST PHILADELPHIA, PA.

DEAR SIR—In the September No. of the Horticulturist for 1851, you published an article over the signature of THOMAS W. LUDLOW, Jr., entitled "The Curculio versus Lime and Sulphur."

After reading Mr. LUDLOW's account of his experiment, I concluded to try it myself this spring, and am happy to be able to say, that at present there is every prospect of its most perfect success.

I regretted that Mr. LUDLOW was not more particular in reference to the quantity of sulphur used, in proportion to the whitewash. I shall therefore give you an account of my experiment, which was as follows:

Immediately after the fall of the blossom, (May 18,) say when the fruit was about as large as an ordinary pea, I observed very many of the plums were already stung by the curculio; I therefore immediately procured a pailfull of whitewash, (cold,) mixed much thicker than is ordinarily used for white washing, and added a half pound of flour of sulphur, (and in this proportion throughout the experiment.) I then used a common tin garden pump for throwing the whitewash on to the trees, the nozzle of which was fully three-eighths of an inch in diameter, and in consequence a great deal of material was wasted in the application; this I repeated twice afterwards, at intervals of three or four days each. Hereafter I shall procure a rose to fit the pump, similar to a watering pot rose, by which I shall be able to cover the trees more perfectly, and at the same time prevent the lime disfiguring other plants in the vicinity.

About this time last year, there was not a single plum left on either of my trees—now, they are quite as full as I could wish.

A number of my plums, this year, have become semi-transparent, and fallen from the trees from time to time, although not stung. Is this caused by an excess of lime? But among all that have fallen that I have examined, I have found but *one* that had a worm in it; the wounds caused by the sting of the curculio have healed over smoothly, and do not penetrate more than a sixteenth of an inch.

Should this meet the eye of Mr. LUDLOW, I would be glad to hear from him in reference to his experiments this year, and particularly as to whether his fruit turned yellow and withered on the tree.

Some persons may be deterred from trying the lime and sulphur, on account of the unsightly appearance of the trees; to such I would suggest that a little green coloring matter might probably be added, without destroying the value of the compound.

I would also state in this connection, that myself and others have covered portions of our trees with mosquito netting, to keep the rascals out; in most instances the fruit is badly bitten and destroyed, in others, where the netting was so close as to exclude him altogether, the fruit is not stung, but so little is left upon the tree as to render the experiment worthless.

Yours respectfully,

WM. STOKES.

West Philadelphia, July 8, 1852.

NOTES ON FORTY-FOUR VARIETIES OF STRAWBERRIES.

BY R. G. PARDEE, PALMYRA, N. Y.

We are just closing another highly favorable season of that beautiful and delicious fruit—the strawberry. The skies and the genial rains have been propitious indeed, and in no previous season have my petted vines yielded larger or more abundant fruit. More than twenty varieties in my garden presented me with specimens measuring four, and some six inches in circumference.

I particularly desired a favorable season, because I had quite a number of new varieties to test side by side with other standard kinds—and in order thereunto, had planted in the first place, on the 12th July last, a strong healthy plant of some thirty varieties, interspersed with an occasional plant of New Pine, Hovey's, &c., on a long bed running through a part of my garden—placing the plants about two feet apart. I then placed a few hills of the same varieties in rows in other parts of the garden, while the old plants, with a few runners attached, remained in masses around the original stools, so that each variety had a triple trial. My garden, small as it is, comprises in different parts of it, a light sandy loam, a coarse gravel loam, (where it is even stony,) and a stiff clay. It has not been manured, or even trenched, within five years, with the exception of two small beds as an experiment, which was no benefit—and yet in other soils I would manure freely, and trench deeply at right times, if needed, and most soils would need both.

I was careful to water and fertilize the plants on trial, alike in all respects, and for a fertilizer this spring, I used one pound each of sulphate of potash, nitrate or carbonate of soda, one-quarter pound sulphate of ammonia, together with say two pounds superphosphate of lime, and two pounds guano, in a solution with thirty gallons water—applied once in ten days or two weeks, until in flower, as last year.

The whole were mulched with tan-bark on setting out, and all the plants flourished, unchecked from any cause. Allow me to note some particulars of the different varieties.

1. *Burr's New Pine* has maintained with me its high reputation as a family fruit. All my visitors have united with me in giving it the preference in flavor, over all others, not excepting Swainstone Seedling, British Queen, &c. It has also borne largely, and the fruit has been good size, occasional specimens over four inches; besides we picked ripe fruit of this variety June 6, which was three or four days earlier than the Large Early Scarlet, Alice Maud, or any other variety in my grounds, and it supplied my table proportionably early, and this too without any coaxing.

2. *Hovey's Seedling* has done nobly, having borne specimens of the largest fruit again on my grounds, and it has also yielded good crops.

3. *Black Prince* has again borne finely, and exhibited beautiful specimens of large fruit. Occasionally I have found a berry which proved to be of the most exquisite flavor, but the majority of them have remained watery, and deficient in flavor. The largest, finest ones in appearance, were often the most deficient in flavor.

4. *Jenny's Seedling* has borne remarkably well for that variety, rather exceeding Hovey's in quantity, and only slightly below it in size—while it has proved, when fully ripe, to be of very high flavor—very juicy and sprightly.

5. *Monroe Scarlet*, one of ELLWANGER & BARRY'S seedlings, has this season proved to be, under three separate trials, the largest bearer on my grounds. The plant on my single bed produced eighty large size berries on five long foot stalks—the largest berry

measuring four and three-fourth inches, but all were of fine size. The flavor was universally pronounced good. I have an expectation this will prove a valuable variety. Last year it bore well under unfavorable circumstances.

6. *Climax Scarlet*, another seedling as above, bore very well, and the berries were of a higher flavor still, although fewer in number, and smaller in size.

7. *Genesee Seedling*, (s)* another of E. & B.'s new seedlings, produced fruit of great beauty, but it did not with me equal in quantity, nor surpass in flavor, their *Monroe Scarlet*.

8. *Montevideo Pine*, (s) one of PRINCE's seedlings, did not equal this year in size or flavor, my expectations; perhaps it may do better another year.

9. *Charlotte*, another of PRINCE's, is one of fair size—a fair bearer on short foot stalks, and of delicious flavor.

10. *Lizzie Randolph*, another of PRINCE's, is described in his catalogue as "averaging larger than Hovey's, round and very productive;" all this it has actually done the past season in my grounds, in all the three separate tests. Hovey's has given single specimens larger than Lizzie, and yet the average has been the other way; but on the point of flavor, Lizzie is decidedly below Hovey.

11, 12 and 13. *Prince's Primordean*, (s) *Estelle*, and *Cornucopia*—neither have answered the purpose at all this year. They may do better another year.

14. *Primate* (s) has done somewhat better.

15. *Profuse Scarlet* (s) has borne a good supply of fine flavored fruit, resembling the *Large Early Scarlet*.

16, 17 and 18. *Richardson Cambridge*, (s) Early and Late, have all done very well: the largest and highest flavored being the late. I am not quite satisfied that either of these have any superior qualities over other varieties which excel in size or flavor. We shall see.

19. *Princess Alice Maud* (s) has again borne tolerably early and well, and is also of good size.

20. *Lord Spencer*, (s) notwithstanding its very agreeable flavor, has so degenerated in size and productiveness, that I discard it.

21. *Roseberry*; (s) 22. *Miller's Seedling*; (s) 23. *Wild Strawberry*; (s) 24. *White Seedling*; (s) 25. *Stoddard's Seedling*, (s) and some others, I discard for same reason.

26. *Crimson Cone*, (s)† although quite acid without sugar, yet its productiveness and beauty render it quite desirable.

27. *Large Early Scarlet* (s) has borne larger and more fruit with me this season, than ever before. It is a good staminate to fertilize others.

28. *Boston Pine* (s) has done nobly this season.

29. *Royal Scarlet* (s) has borne quite a fair number of clusters of beautiful fruit, but alas, deficient in flavor, and is rejected.

30. *Rival Hudson* is one of the most productive market fruits.

31. *Willey* has borne next in quantity to *Monroe Scarlet*—yet I am not sure but it may be a competitor for productiveness; although of only medium size, yet it bears often sixty and seventy, and occasionally many more good berries, to a plant, and the fruit is of pleasant sprightly flavor, and hard for market.

32. *Prince of Orleans*, (s) bears very well under ordinary cultivation—only medium size, tender, rather pleasant flavor, and bears longer than usual.

* All the sorts marked (s) have *staminate* blossoms—those not marked have *pistillate*.

† *Crimson Cone* bears *pistillate* flowers—probably an error. Ed.

33. *Swainstone Seedling* (s) has borne freely, and is a very rich and aromatic fruit, yet not so agreeable flavor as some other varieties.

34. *British Queen*. (s) I am not yet able to bring up the size of this fine fruit to compete with our English friends over the water—neither does it as yet bear well. I will try to do better with it another year.

35. *French Hautboy*, (s) like common Hautboy, a profuse bearer, with its peculiar flavor.

36, 37, 38 and 39, are *McAvoy's Superior*, *Longworth's Prolific*, (s) *Moyamensing Pine*, and *Walker's Seedling*; (s) have all borne fruit, enabling us repeatedly to test the fine rich flavor of each. The plants are also very vigorous; but I must wait another season before I can learn much about them.

40. *McAvoy's Extra Red* is very much in the same condition as the preceding, except inferior in flavor.

41. *Kitley's Goliath* (s)—could not test even the flavor, but it is now in blossom.

42. *Bicton Pine* (s) has borne me a few very large and beautiful specimens, of rich aromatic flavored fruit. It is the new strawberry from England; *white*, with a delicate blush on one cheek.

43. *Crescent Seedling* By a series of mishaps with this plant, I finally lost the whole of four successive importations from New-Orleans, after a part had finely started to grow here. The fifth order was more successful, and I have six or eight plants now growing vigorously in my garden, and striking runners freely—but I received them in May, in pots, and so am unable to report any test of them, as I ardently hoped *this season*; next season we will see if they continue to bear through July and August, as they do in New-Orleans.

I have some other new kinds on trial, one of which has considerably excited my expectations. I have also some fine seedlings in bearing, decidedly different from others, and yet I cannot see as they excel the old standard varieties in any important sense, and therefore they are unworthy of notice. If I had no strawberries, and wished to set out a bed for family use, with my present knowledge, I would select one fifth of them each of No. 1, 2 and 5; one-tenth each of No. 26, 27, and 28. Then add, perhaps, five or ten plants each of 3, 4, 10, 18 and 19, and of course try the new kinds, 36 to 43. For market I would largely add No. 30 and 31.

I have thus endeavored to give you an impartial account as I am able to do, of my observations on most of the varieties in bearing in my garden the past season, and am unconscious of having been biased in any way, by fear or favor. If injustice has been done to any one, I will cheerfully repair it, if another season's experience will furnish facts for the basis.

Again permit me to assure your readers that another interesting season's observations of the habits of the strawberry, has only confirmed me in the opinion that strawberries can easily be raised with us at a cost of not exceeding six to eight shillings per bushel, and the crop ought to be about as certain as a good farmer's crop of corn. Either are impatient of neglect, and both are alike certain to repay attention. The knowledge how to raise either, is easily learned in both cases, and good soil will raise both. R. G. P.

Palmira, July 8, 1892.

ON THE CULTURE OF THE ACHIMENES.

BY ALPHA.*

NEARLY all the varieties of this lovely genus deserve to be ranked with the most beautiful and useful ornamental plants which our glass houses possess. Their flowers, of many delicate and pleasing shades of color, are produced in great abundance for months in succession, and the plants themselves are mostly of compact growth and easy culture. While in a growing state, all the varieties require the assistance of a rather warm and moist atmosphere, but during their flowering season, they may be removed to a cooler and drier situation, such as a close green-house or conservatory, where they may be said to be indispensable during the summer and autumn months.

As all the Achimenes increase rapidly by means of their scaly tubers, artificial propagation is almost unnecessary, except in nurseries, where it is perfectly understood. I shall, therefore, merely state that cuttings of the young wood, treated in the ordinary way, and placed in a brisk bottom-heat, will root freely. Taking it for granted that there is a supply of tubers at hand in early spring, they should be separated from the soil in which they have been wintered, and planted in shallow pots or pans, (the latter are preferable,) well drained, and filled with light sandy soil to within two inches of the top. The tubers should be laid rather thickly and regularly upon the surface, and covered with mold to the depth of an inch, or as much more as the pan will hold.

Water should be sparingly applied, only just sufficient should be given to keep the soil in a moist state. If active growth is desired without loss of time, plunge the pots or pans in a gentle bottom heat. When the plants are about three inches high, they should be carefully lifted from the soil, and potted in seven inch pots, placing twelve or more plants in a pot, according to the sized specimens that may be wanted. After potting, place them in a close and rather warm atmosphere, till they have become fairly established; a temperature of 60° at night, allowing it to raise 10 or 15° with sun heat in the day time, will be found the most congenial to the plants at this stage of the growth. As soon as they are established in their pots, air should be freely admitted on all favorable occasions, and the plants kept near the glass. If all goes on well, they will soon fill the pots with roots, when a final shift will be necessary. The size of the pots for this shift should be regulated by the size which it is desirable the plants should attain; ten inch pots will be sufficiently large where moderate sized specimens only are required: but for very large masses, twelve or thirteen inch pots may be used. Some first rate cultivators prefer deep pans for Achimenes, but these are better suited for plants to be flowered in a moist, warm house, than for those intended to be removed to the green-house or conservatory, during the flowering season. About twelve plants may be placed in a ten inch pot. It will be necessary to maintain a moist atmosphere, and keep the house rather close till the plants can lay hold of the soil; and water must be carefully supplied during this time, but the syringe may be used freely, if the weather happens to be bright. As soon as the plants start into free growth, after potting, air may be more freely admitted, and a slight shade during the forenoon of sunny days, will be found beneficial. Varieties of the habit of pedunculata, should be stopped as soon as they are established in their flowering pots; and if it is intended to train them in a formal manner, all the kinds should be staked before the shoots have become entangled. The stakes should be cut off the height to which the variety is

* From the London Gardeners' Chronicle.

likely to attain. They should be so arranged as to form the frame work of a handsome specimen, and the shoots should be kept carefully tied as they advance in growth. When it is supposed that the pots are filled with roots, an occasional watering with clear manure water may be given. Indeed I regularly water my *Achimenes* with weak manure-water, from the time they are well established in their flowering pots, till the blooming season is over, and I think that the plants are greatly benefitted by this treatment. If it is intended to remove the plants to cooler quarters while they are in flower, they should be judiciously and carefully prepared for the change, by giving more air, and gradually lowering the night temperature as much as circumstances will allow. When removed, they should be placed in the warmest part of the house to which they have been transferred, and guarded from currents of cold air; but if they can be kept in an intermediate house, the flowers will be larger, and the blooming season will be prolonged; still, a close kept conservatory will supply a suitable temperature, at least during summer and early autumn.

When they have done flowering they may be thrown to the rubbish-heap, merely preserving about two pots of each variety for stock; these should be kept sparingly supplied with water, and if they can be removed to a warm dry house, the ripening of the tubers will be better secured than under other circumstances. Water must be altogether withheld as soon as the leaves assume a sickly appearance, and when the tops die down, the pots may be removed to any dry situation, where they will be free from frost, and where they may remain till the tubers are wanted for starting next spring.

For soil, take light sandy turfy loam, peat, leaf-soil, and thoroughly decomposed cow-dung, in about equal proportions, to which add as much sharp sand as will ensure a free percolation of water through the whole materials. The loam and peat should be used in a rather rough state; and the dung should be broken up and intimately mixed with the sand before it is added to the compost. All the *Achimenes* are very impatient of stagnant moisture at their root; therefore secure perfect drainage by using plenty of potsherd, or lumps of charcoal; indeed, when pots are used, they may be one-third filled with draining materials.

ALPHA.

STRAWBERRIES AND THEIR NUTRITION.

BY A. GERALD HULL, NEWBURGH, N. Y.

PROFESSOR EMMONS, in his "Agriculture of New-York," makes this commentary:—"The soil must possess all the inorganic substances, as well as organic, which are essential to the perfection of vegetables; if any one is wanting it must be supplied."

This applies so forcibly to the strong common sense of every earnest cultivator in the great vegetable domain, that he feels at once the apparent truth of a rule, which asserts for its result the perfect development of every plant that is legitimately supplied, whether by leaf or root, with its full measure of organic and inorganic nutrition. This rule in its ultimates, I think, admits of exceptions.

Since Professor MAPES has advocated the use of tan-barks for a mulch for strawberries, asserting that the *tannic acid* was specifically indicated as an organic constituent of this fruit, his opinion has been canvassed in a spirit of denial, satire and ridicule. Still it may be true; and taking it for granted that the Professor's postulate is correct, the alleged advantages of the tannic acid for the strawberry prove that its efficacy is in an anomalous disproportion to that of the other recognized constituents of this fruit. Again, a refer-

ence to my remarks and experiments on the specific nutrition of strawberries, contained in the last August number of the *Horticulturist*, will disclose further collateral evidence of the caprices of plants in imbibing nutrition at proportional variance with their analyses. These discrepancies from the general rule, and the desire to awaken inquiry and experiment to the highest degree, in order to mature the finest fruit, have rendered me a little presumptuous, perhaps, in suggesting another rule of specific nutrition:

That some fruits—whatever the organic or inorganic analysis of the plant, or of the fruit, may disclose and seem to require—possess one or more special constituents, each one of which is demanded as an increased, correspondent, and specific nutrition, that bears no proportion to that of the exact analysis.

It will be more satisfactory, in the consideration of this theme, to pursue the investigation in as radical and scientific form as possible, which will be best obtained by a survey of the few exact organic and inorganic analyses which have been so far afforded.

Inorganic analysis.—I am indebted to Mr. GEORGE RONALDS for the following analysis of the strawberry, made by THOMAS RICHARDSON, of England, quoted from page 318 of the "Annual Report of the Progress of Chemistry and the allied sciences, 1847-48."

	<i>Fruit.</i>	<i>Plant.</i>
Potassa,.....	21.07	38.65
Soda,.....	27.01	9.27
Lime,.....	14.21	12.20
Magnesia,	trace	5.85
Sulphuric acid,	8.15	5.89
Silicic acid,.....	12.05	2.58
Phosphoric acid,	8.59	15.58
Phosphate of sesqui-oxide of iron,.....	11.12	8.65
Chloride of sodium,.....	2.78	1.28
	100.00	100.00
Percentage of ash,	0.41	0.89

In the May number of the *Horticulturist* may be found the subsequent analysis of the strawberry *plant*, by Mr. BILIUS KIETLAND, which is thus described. "One hundred and sixteen grains of the ashes were taken, prepared from the leaves and stalks, immediately after they had borne a moderate crop of fruit."

Silica,	6.117	grains.
Charcoal and sand,.....	3.101	"
Perphosphate of iron,	1.515	"
Lime,	26.519	"
Magnesia,.....	8.908	"
Sulphuric acid,	1.469	"
Phosphoric acid,.....	6.970	"
Chlorine,708	"
Potash,.....	83.154	"
Soda,	2.790	"
Carbonic acid,.....	23.008	"
Organic matter and loss,.....	1.739	"

116.000 grains.

In the two analyses of the *plant*, the analysts coincide in the proportion of the *potash*; the discrepancy as to the other constituents is striking. In the analysis of the *fruit*, by RICHARDSON, the predominance of *soda* will excite some surprise, although the *potash*

holds a second and very important position. At the same time the united analyses of plant and fruit exhibit as the proportion of potash 59.72, and that of soda only 36.28.

Affirmative of the general rule. I stated last year, under the head of specific *inorganic* manures, that many strawberry plants apparently demand varied specific nutrition, as much so as different families of trees. A large bed was prepared and divided into three equal portions; one containing *potash* neutralized by muck; another *ashes* treated in the same manner; and last *phosphate of lime* (bone dust.) Lines of the same plants extended across the three soils. Boston Pine, Crimson Cone, Iowa, Burr's Seedling, Columbus, Rival Hudson, Late Prolific, Willey, British Queen, Myatt's Eliza, Victoria, Huntsman's Pistillate, Scarlet Melting, Ohio Mammoth, and Scioto, displayed a sturdy growth throughout this entire triple tract; at the same time they exhibited a positive preference for the potash over the ashes; for the ashes over the bone dust. The section of the triple tract, charged with potash, manifests an advantage this season much more conspicuous, the plants and the fruits having gained at least one-fourth over their associates.

Exceptional to the general rule. Directly opposed to the preceding results, however, Black Prince and Burr's New Pine became almost worthless in the same potash tract; while runners of 1850, transferred from these same plants to the natural soil of my grounds, well enriched with ordinary stable manure and street sweepings, have this year produced specimens of fruit nearly if not quite equal to their best reputation. Buist's Prize, also failed under potash nutrition, and developed the richest foliage and finest fruit in the department of phosphate of lime (bone dust.) Hovey's Seedling failed in a tract of phosphate of lime, yet rejoiced, with its luxuriant foliage and fruit, in a tract of soil supplied with *lime* as its main element.

WILLIAM CULLEN BRYANT, Esq., who is equally at home, either in his town editorial chair, amid classic folios or political theses, or among strawberries or potatoes, at his cottage, so pleasantly nestling in the groves of Roslyn, has garnered into his pomological storehouse an extract which is quite pertinent at this moment:

STRAWBERRIES.—The following recipe for keeping old strawberry beds in bearing, is from the *Friend's Review*, a Philadelphia publication. What proportion of its efficacy depends on the frequent and regular watering, and what on the application of the nitre and glauher's salt seems uncertain:

"Those who know anything about the magnificent strawberries and the immense quantity of them raised in a bed 30 feet by 40, for several years past, in the garden formerly owned by me in King street, may like to know the process by which I cultivated them. I applied about once a week, for three times, commencing when the green leaves first began to start, and making the last application just before the plants were in full bloom, the following preparation: of nitre, of potash, of glauher's salt, and sal soda, each, one pound; of niirate of ammonia one-quarter of a pound—dissolving in thirty gallons of rain or river water. One-third was applied at a time; and when the weather was dry I applied clear soft water between the times of using the preparation—as the growth of the young leaves is so rapid that unless well supplied with water the sun will scorch them. I used a common watering pot and made the application towards evening. Managed in this way there is never any necessity of digging over the bed or setting it out anew. Beds of ten years old are not only as good, but better than those two or three years old. But you must be sure and keep the weeds out."—*Evening Post*.

Here it will be perceived that, of four equally proportioned ingredients, two are formed of potash, i.e. potash and nitre (nitrate of potash;) and two of soda, i.e. glauher's salt (sulphate of soda) and sal soda (carbonate of soda.)

Prof. J. F. W. JOHNSTON, on page 328, of his "Agricultural Chemistry," in discoursing of carbonate of potash and carbonate of soda, states: "Many experiments have shown that both of these substances may be employed in the field with advantage to the grow-

ing crop." "In gardening, they greatly hasten the growth and increase the produce of the strawberry"—"Mr. FLEMING, of Barochan, has informed me that, he found this to be the case with the common potash; and Mr. CAMPBELL, of Islay, with the common soda of the shops. They should be applied early in the spring, and in the state of a very weak solution.

These results confirm the experiments contained in Mr. BRYANT's extract, if they did not give rise to them. And, while engaged with Prof. JOHNSTON on this subject, (page 329,) a very valuable practical conclusion may be derived to the amateur cultivator, as I knew by experience, touching the efficacy of the carbonates of potash and soda combined with organic matter. "It is stated by SPÄNGEL [*Lehre vom Dünger*, p. 402,] accordingly, as the result of experiment, that they are most useful where vegetable matter is plentiful, and that they ought to be employed more sparingly, and with some degree of hesitation, where such organic matter is deficient."

Touching the liquid applications, indicated by Mr. BRYANT and Prof. JOHNSTON, I ought to mention that Mr. DOWNING has been a long time an advocate of applying specific nutrition in *solution* to all fruit bearing plants during the fruiting process. The attributes are increased susceptibility to the plants at this period by which an appreciative receptivity of their special constituents is most sensitively and successfully sustained. The preferred times of application differ, the one preceding, the other attending the development of the fruit; but this may engender no material variance as to result, although my own experience accords with the opinion of Mr. DOWNING.

Under the "affirmative" record, the results, derived from the varieties there enumerated, confirm in the main the truth and value of the general rule for uniform specific nutrition. Potash, the major element of the analysis, holds the highest representation in the production of plant and fruit; ashes (potash and lime—the latter also an important substance in the analysis) present the next claim; and phosphate of lime (holding a questionable or minor place in the analysis) produces the least satisfactory impression. Yet the careful observer will perceive that the *potash*, alone, is quite equal to all the requirements of the plant and fruit in the department of *inorganic* constituents, and even here enforces its place as one of the special constituents, which is demanded as an increased, correspondent, and specific nutrition that bears no proportion to that of the exact analysis.

In the experiments, quoted by Mr. BRYANT, potash and soda were used in *equal* proportions. The result offers "magnificent strawberries" in "immense quantity;" and, what is of equal importance, *perpetuity* to the plants in the *same bed*; plants *ten* years old being in better condition than those of two and three years. According to the analysis of *fruit*, by RICHARDSON, the general rule of nutrition is more satisfactorily sustained here than in the other instances; while his analysis of *fruit* and *plant* gives the preference again to the potash, which, in the actual proportion applied to the plants, only equalled that of the soda. Agricultural chemists, e.g. Prof. JOHNSTON, there are, however, who might be cited to demonstrate the special rank to which the potash is entitled from "the more abundant presence of potash in the soil generally;" or from the probability of the soda being the correlative of potash to the extent of supplying its place as a constituent of nutrition; or from the soda and potash acting alike in *preparing* the food of the strawberry, by combining with and solving the vegetable matter of the soil. The experiments of Messrs. FLEMING and CAMPBELL confirm the reciprocal quality of substitution of these two alkalies for each other, either for direct or subsidiary nourishment of the strawberry.

The "exceptional" instances illustrate the extraordinary caprices of the strawberry plant, and naturally awaken conjecture as to the cause. It is not probable, although the

different varieties belong to one family, that these exceptional members would, in their analysis, exhibit different constituents which would harmonise with the prepared mineral manure? Or, is it not more probable, that these recusant plants are endowed with interior impulses, and secreting forces, by which, in accordance with the rule I have proposed, they prefer one or more constituents in excess, and utterly disproportioned to the rest, and thus elaborate through their elected media, their tempting and luscious products?

Organic analysis.—The only organic analysis I have at hand, I take from the "*Vollständige Bibliothek oder Real Lexicon, Leipsic, 1836.*" It represents the strawberry fruit to be organically composed of *citric* and *malic acids*, and a large proportion of *mucous sugar*, ("*schleimzucker*," glucose or grape sugar, I presume.) No allusion is here made to *tannic acid*; and I am not aware that there is any authority for sustaining the idea that these three acids, and grape sugar, may be substituted for each other; or that they have even the advantage of isomorphous bodies, admitting the questionable conjecture to be correct, that isomorphous bodies may erect a specific dynamic influence, as unerring in effect as their crystallization is uniform.

Tannic acid.—Professor MAPES—on making personal application to him respecting this acid, courteously replied to me in substance: "that *tannic acid* is contained in the cortical, or external surface of the *fruit*; that, by subjecting a *large* quantity of these surfaces to the appropriate chemical tests, he had detected the presence of this acid; that he attributed the flavor and fragrance of the strawberry, which belongs to this surface, to the specific property of this acid; and that he reiterated with confidence, his private and public assertion, that tannic acid applied to strawberry plants, in the proportion of one gallon of tan-liquid to one hundred gallons of water, made an evident and striking improvement in the size and flavor of the fruit." Here is a plain, straight forward statement, savoring of sincerity and truthfulness. Why should the existence of tannic acid in strawberries be questioned, then, until the cavillers offer, instead of words, their own analysis, to counterpoise that of the Professor! Irrespective of the analysis, a few experiments will be presented, which the reader is desired to scrutinize closely, and thence deduce his own conclusions.

Tan-bark mulch.—Mr. DOWNING, among others in this vicinity, has used the tan-bark as a mulch, and invariably with a marked benefit to their strawberries, over those ordinarily treated. Mr. CHARLES DOWNING informed me that he ate strawberries twenty years ago, taken from a tan-bark bed, that were then remarkable for their excellence. It will be answered, 'it is without doubt true, but the enhanced value of the fruit should be ascribed to the *mulch*, and not to the specific influence of the tannic acid.' I have proved the mulching by hay, straw, muck, charcoal and iron cinders, and yet have found no result equivalent to that of the tan-bark. My beds of British Queen, which I have heretofore nursed with extreme care, were mulched last year with tan-bark, and have presented this year an array of force and beauty quite equal to defy the sharp edge of the sternest skepticism.

Experiments with tannic acid and other liquids. I selected three rows of each variety of four different kinds of strawberries, which traverse my triple bed of inorganic manures, and made my applications in the subjoined order. The liquids were applied from May 18th to June 23d, twenty-five times, usually about sunset, the omissions being supplied by rain.

RIVAL HUDSON.

1. { Tannic acid—in the form of tan-bark liquor, one gallon to one hundred of water.
- { Citric acid—the expressed juice of one lemon to four gallons of water.
- { Malic acid—one pint of cider to four gallons of water.

June 22d. The strawberries nourished by *tannic acid*, exceeded the others in *quantity*. The fruit of the *citric acid* presented the largest average size. Three dishes of the fruit were subjected to the judgment of two ladies, who declared the strawberries of the *malic acid* to be the sweetest and highest flavored; those of the *tannic acid* 'next,' and those of the *citric acid* comparatively 'tart.'

June 25th. Second picking. A gentleman essayed the three kinds, and his taste awarded the first preference to the fruit of the *tannic*, the second to that of the *malic acid*.

BURR'S NEW PINE.

2. { Tannic acid.—This and the subjoined acids were applied as described under Rival Hudson.
 { Citric acid.
 { Malic acid.

June 22d. The *quantity*, as with the previous fruit, favored the *tannic acid*. The *citric acid* fruit ranked second as to *quantity*, and first as to average size. The same ladies, in tasting this fruit, again selected the *malic acid* specimens as the richest flavored, giving the second choice to those of the *tannic acid*. June 25th. The *quantity* again sustained the *tannic acid*. The same gentleman decided in favor of the *tannic acid* flavor, and preferred that of the *malic* next.

BURR'S OLD SEEDLING.

3. { Tannic acid—one gallon of tan-liquid to one hundred gallons of water.
 { Manure water—the manure liquid of the barn-yard.
 { Spring water—water from an adjacent pond.

June 22d. The measure, also, of this fruit, gave the advantage in *quantity* to the *tannic acid*, the second place to the spring water. The manure water produced the greatest number of the *largest berries*.

July 3d. Three dishes of fruit were submitted to the gustatory judgment of Dr. JAMES GILBERT, of Savannah, and Mr. ROBERT COLGATE, of New-York. The labels were purposely removed, and the trials were made at two different periods of the day. Their final decision was "that the three specimens of fruit exhibited a marked and peculiar flavor, sufficient to distinguish them apart; that *tannic acid* examples were the most luscious and artificial; those of the spring were the next best and most natural; and those of the manure water were, also, more artificial, but not so palatable."

COLUMBUS.

4. { Tannic acid—tan-bark liquid, diluted as before described.
 { Pondrette water.
 { Spring water.

June 22d. The *tannic acid* bed produced the greatest *quantity*. The spring water specimens exceeded the others in average size.

July 5th. The *tannic acid* examples, again surpassed the others in *quantity*, the pondrette assuming the second position. Two gentlemen and a lady made trial of the berries of this variety, and pronounced in favor of those nourished by *tannic acid*.

Specimens of the above named varieties of fruit have been sent to Mr. DOWNING—the labels intentionally omitted—with a desire that he would arbitrate on their respective claims, to which he kindly assented.

[We find on referring to our notes, made with Dr. HULL's numbered samples of Burr's New Pine and Rival Hudson before us, the following: No. 1, highest and best flavor; No. 2, good but inferior; No. 3, less good—somewhat watery. These now prove to have been fed as follows: No. 1, *tannic acid*; 2, *citric acid*; 3, *malic acid*.

In the other samples we found the sample "No. 1" (which now proves to have been stimulated by the tan liquor) uniformly the best. The others were variable, No. 3, (spring

water,) having the least flavor, and in the case of Columbus—a scarlet strawberry of not much flavor—the first was rendered somewhat bitter, which is now explained by the over-watering. Ed.]

The experiments being completed, the organic analysis may now be opportunely recalled. Citric and malic acids and mucus sugar are presented as the main constituents; and to supply the requirements of the strawberry, according to the rule of Prof. EMMONS, these three of the organic substances liberally contributed, should be all sufficient to mature the finest form of fruit. Still, Prof. MAPES has presented the tannic acid as *another* constituent. In order to test this predicate, and the comparative powers of the citric and malic acids, I made the preceding experiments with scrupulous attention.

Citric acid.—Lemon juice was the most convenient representative of this acid, and well diluted with water, exercised no deleterious influence on plant or fruit. In both instances of Rival Hudson, and Burr's New Pine, it seemed to increase the size of the fruit, and to increase its acidity.

Malic acid.—The most convenient substitute for the pure acid was *cider*, diluted with water. In referring to Rival Hudson, and Burr's New Pine, the trials of taste rendered a preference on the part of two witnesses for this acid, of another for the tannic, placing the malic second. This reduces the contest to these two acids, which may possibly contribute additional force to the value of the tannic. Thus, instead of pure malic acid, cider was applied. "Cider," according to the analysis of Dr. J. H. Salisbury, "*Patent Office Report, 1850-51—Agriculture*"—contains alcohol, sugar, gum or dextrine, malic acid, and the phosphates and sulphates of the alkalies, with a little tannic and gallic acids." Here arises an important query—how much of the flavor, allowed to the malic acid, must be attributed to the tannic acid which the cider contained?

Mucus sugar.—I regret extremely that I did not subject some of my plants to experiments with this substance, which, however, I intend to do another season. Prof. DRAPER states—"when a solution of grape sugar, containing lime, is kept for some time, the alkaline reaction of the lime, finally disappears through the formation of *glucic acid*. It is soluble, deliquescent, of a sour taste, and yielding, for the most part, soluble salts." By applying, repeatedly, a solution to the plants in a soil nourished by lime *glucic acid* would probably be formed, and how far it may hold an important relation to the nutrition of or specific impression on the strawberry may then be determined.

It has also been stated that the value of the tannic acid application was dependant on the liquid and not on the tan, and that simple water was equally efficacious. Therefore manure water, poudrette water, and spring water, were essayed side and side, subject to the same exposure in every respect, and the results were carefully watched and recorded. The theory of the virtue of tannic acid was, in consequence, submitted to a careful, candid, and severe ordeal to determine the truth, and to furnish the best practical lesson for the cultivation of strawberries.

Manure water berries, exceeded in average size in the trial of Burr's Old Seedling. *Spring water* produced the greatest number of the largest fruit in the experiments with the Columbus. *Poudrette water* fruit gained in quantity over the spring water. The three substances held an inferior position to the tannic acid as to *quantity*.

Tannic acid—It must be conceded, allowing the previous recorded experiments, that a free application of this acid has produced unequivocal effects; that it has surpassed *all* the competing substances in creating *quantity*, and imparting *flavor*.

At the same time, the decision in regard to flavor may be liable to exceptions, as judgments are necessarily more or less capricious, owing to circumstances; some always pre-

ferring sweet, others acid fruits, the sense of taste varying at one time from that at another, &c. Canvassing this topic with reference to accurate results, it must be admitted, if the existence of tannic acid be granted, that it maintains but a very moderate quantitative position as a constituent in the analysis of the fruit alone. If there be then, but a trace of tannic acid in the strawberry, while the other constituents exist in a large proportion, this, among the organic substances, is one which is demanded as an increased, correspondent, and specific nutrition, that bears no proportion to that of the exact analysis.

A rule of action now naturally flows to the practical cultivator. In developing the most valuable qualities of the strawberry, he may use all the constituents of the organic and inorganic analyses, consulting his convenience and economy; but he can perfect the finest fruit in abundance and richness, by selecting *potash* from among the inorganic, and *tannic acid*, from among the organic constituents of this delicious gift from the "Giver of all good."

A. G. H.

Newburgh, N. Y., July 15, 1852.

REMARKS.—Dr. HULL's record of his careful experiments with special manures for the strawberry, deserves the attention of cultivators. We may add, for the information of those who know nothing of the soil, that it is naturally a heavy, and rather poor clayey loam, on a gravelly subsoil—by no means calculated by its fertility and friability, to favor the cultivator of delicate fruits; and notwithstanding this, the crop obtained by Dr. HULL's various modes of culture, has been surprisingly large. The beds of most varieties on a very large strawberry patch, were literally loaded with the finest fruit.

The nice cultivator will find a good deal in our correspondent's detail of experiments to stimulate him to make extended experiments; but the *practical results for general use*, which we deduce from the foregoing article, and our observation of the strawberries themselves, are these. 1st. The best preparation for strawberry beds is to have the soil well trenched and manured with stable manure, mixed with a liberal supply of *leached* ashes—that substance supplying both potash and soda in sufficient quantities, (fresh ashes has more lime and far less potash—the latter being largely added by the soap boilers.) 2d. The finest and most delicate of the Pine Strawberries—which usually fail in this climate, may be grown perfectly by the aid of a good mulching of fresh tan-bark. 3d. Tan-liquor diluted adds to the flavor of strawberries—but we are confident that when *fresh* tan is applied in the autumn as a covering to the beds, sufficient tannic acid finds its way into the soil by means of the rains, to answer this purpose. Notwithstanding—as a strawberry crop is always greatly increased in size and quantity by watering the plants, it is better to water them with tan-liquor, one part to one hundred.

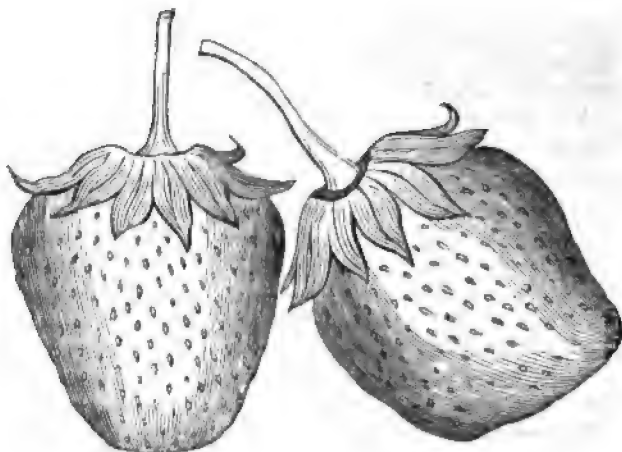
A great deal has been said and written by our horticultural friends at the west, about the absolute worthlessness of all the large *Pine* Strawberries of Europe, such as British Queen, Keen's Seedling, &c.,—which bear mostly what are called *staminate* blossoms, as being barren, and never yielding more than half a crop in the United States; and their place has been in a good degree supplied with varieties of the *scarlet*, (native strawberries, such as the Hudson, Iowa, Willey, &c.—bearing pistillate blossoms, and producing enormous crops with little care, in this climate.

And as most persons have found it difficult, from the greater heat of our climate burning up the plants, to cultivate the pine strawberries, and easy to cultivate the *Scarlets*, the latter have pretty nearly supplanted the former in our gardens. Yet, in Europe, where both grow equally well, no one thinks for a moment, of comparing the flavor of the two, and we never saw *Scarlet* strawberries served at a good table in Europe—but always *Pines*. For our own part, we consider (comparatively) the Hudson strawberries,

with which our markets are mostly filled, *poor sour things*, only fit for preserving—and such fruits as Willey, Columbus, Iowa, Neck Pine, (no pine at all,) and most of the other heavy bearers that, as we understand, fill the great strawberry market of Cincinnati, are no better.* They are when compared to fine flavored pine strawberries, what a sour cooking apple is to the finest Newtown pippin—or the acid Malagatune peaches that fill New-York markets to delicious Rareripes—or poor Teneriffe to the best pale Sherry. But so long as we were denied by our climate the satisfaction of cultivating any others, we were forced, of course, to be contented with sour Scarlets.

Dr. HULL's great success with the British Queen, the most productive and delicious of the Pine strawberries (a fruit to be found at every private table and good hotel in the north of Europe, averaging three to four inches in circumference,) has been so remarkable, and the reason for it is so simple that we predict from it a revolution in strawberry culture; and this result has been had too in the face of a very dry and exposed site—where this same strawberry invariably pushes up in summer if cultivated in the common way. And the whole secret of his success in growing this and the other most delicious pine strawberries—such a Goliath—Schiller, Myatt's Eliza, &c. is nothing more than to make the soil rich and *keep the beds cool in summer and warm in winter by a mulching of two or three inches of fresh tan-bark.*

The adjoining cut is an accurate representation of British Queen Strawberries, taken from Dr. HULL's beds, and not selected but chosen of the average large size. The flavor was higher, and the color richer and darker than any specimens that we saw in England in 1850—though fruit nearly twice this size is by means unusual there. In our own garden we had nearly as good results with



British Queen Strawberries from Dr. Hull's beds.

less care, and this season, in order to satisfy ourselves that these sorts hitherto considered too delicate for our hot climate, were really rendered hardy by the tan mulching, we planted two beds,—mulched one and left the other bare, in the usual way. It is now mid-summer—the mulched bed is very luxuriant and healthy; the unmulched shows the usual half-burned and starved appearance, common to the European Pines in this climate.

As we know our friend Mr. LONGWORTH, of Cincinnati, is the sworn foe of the staminate or Pine strawberries—afflicted with utter want of faith in their power of giving a crop, and the staunch friend of the pistillate Scarlets, knowing them to bear abundantly, we requested our neighbor Dr. HULL to set apart some average hills or patches in his beds of British Queen, and keep an account of their product for the benefit of such skeptics.

* Hovey's Seedling and Burr's New Pine, are exceptions—not Scarlets—but apparently a cross between Scarlets and Pines—by far the best strawberries for this climate in general cultivation—but not equal in flavor to the true Pines.

The result was an average of 164 *berries* to each hill of 20 inches square—a result, considering the large size of the fruit, that we think will satisfy even our Cincinnati friends.

We predict an increased cultivation for the high flavored pine strawberries, and hope for an abundant—particularly by amateurs of many of the Scarlet sorts. Market growers who can command good soil and plenty of tan-bark, will find one bushel of British Queens or Goliaths will command more in the market than three bushels of Hudsons. Their firmness renders them well adapted to carriage. We close this long article with a note of Dr. HULL'S, relating to his cultivation of this variety, which will commend itself to amateurs. ED.

British Queen.—Last autumn I applied a mulch of tan-bark, span-roof form, up to the tops of the plants. Previously, poudrette and street sweepings were worked in freely on either side of the rows. In the spring the tan-bark was levelled on either side of the plants, which, protected from sun and cold, looked as vivid as in the autumn. Subsequently an additional coat of tan was applied about three inches thick. The runners were allowed to grow pretty freely last season, for the benefit of my friends, which gave me rows of plants sparsely scattered instead of hills at three feet distances. It then occurred to me that this strawberry, under our scorching summer sun, might enjoy the protection of partial shading of its own leaves with decided advantage to its fruit. I have been justified in the result, and however much I may have heretofore admired this fruit; I pronounce it without hesitation, to be the finest staminate yet proved; and for *beauty, size, flavor, and productiveness*, I prefer it to any *pistillate* I have seen or tasted among eighty varieties of strawberries. The tannic acid liquid was occasionally applied to the plants during their flowering and fruiting season. The fruit was among the earliest to ripen and the latest to produce, being furnished nearly four weeks.

Product.—Six hills or sections of this strawberry—twenty inches in diameter, afforded forming, maturing, and ripe fruit, as follows: 1. 182; 2. 183; 3. 129; 4. 164; 5. 152; 6. 176; averaging 164 berries to each hill.

A. G. H.

FRUIT CULTURE IN UPPER GEORGIA.

BY TESTIS.

THE remarks of several correspondents in the July number of your paper, on the subject of Fruit Culture at the South, have induced me to throw together a few thoughts on the subject, which are the result of my own experience and observation.

I have several times been surprised at the complaints made through your columns, against fruit trees of northern growth or origin. I live between the 32d and 33d degrees of north latitude, about sixty miles west of the city of Macon. My orchard comprises about thirty of the most popular varieties of the peach and nectarine, and so far from blooming out of season, or casting their fruit, I would gladly stipulate to have only a third of the fruit on the trees, which is yearly set. The late frost this year destroyed so much of the young fruit, that I supposed myself to be safe against the calamities of over-bearing. Not so. A loud crash advertised us a few days ago of the fall of at least half of one of my best peach trees, with its rich burden within a few days of perfect ripeness! One of the *few* varieties which seem to be exempt from this objection, is a *native*. It is the "Columbia," (well known in northern nurseries,) obtained direct from Columbia

county, where it will be found in great perfection. The "Lemon Cling," also of *southern origin*, does not suffer so much—while "George 4th," "Newingtons," "Prentiss' Red Cling," and others, break down. "Van Zandt's Superb" is in perfection with us now, (July 10,) measuring from nine to eleven inches in circumference. I do not believe that peaches will succeed at the south near the coast, and this may be one reason why they fail in Mobile. I know a gentleman within a mile of the city of Savannah, who has a large orchard, well stocked with fine varieties. His trees look remarkably well, and set fruit abundantly in the spring, but he has never matured any of consequence. To the fine varieties of foreign apples named by Mr. WHITE, as succeeding well at the south, I would add the "Red Astrachan" and "Boston Russet." A clerical friend residing near Griffin, (about fifty miles north of this,) told me in 1849, when fresh from the Boston Fair, that he could have beaten their finest Russets with fruit from his own trees. My trees are young, but the "Yellow Bellefleur" and Gravenstein promise well, in addition to some others not generally known here.

As for Pears—judging from the favor in soil and climate, asked in your work on "Fruits and Fruit Trees," for many varieties, and the perfection in which they are easily produced here, I have arrived at the conclusion that our's is the better climate for this fruit. The gentleman to whom I have alluded above, imported about seven years ago, the following varieties of Pear, all on Quince roots. "Louise Bonne de Jersey," Beurre de Amalis, Citron de Carmes, Paeze Colmar, Easter Beurre, Beurre Diel, Glout Morceau, Vicar of Winkfield, Doyenne Gris, and one other by mistake, without a name. He planted them in a close brown chestnut soil. He pruned the branches but little, and never touched the roots. In five years the trees, (which were small when planted,) were in full bearing, and with the exception of one, which is diseased, they produce yearly as much fine fruit as they can hold. But what will you think when I tell you that his "Easter Beurre" is in perfection here early in October! The Vicar of Winkfield" ripened earlier. My own trees are all young. Among those in bearing are Dearborn's Seedling, Louise Bonne de Jersey, Citron des Carmes, St. Ghislain, Julienne, Rushmore, Andrews, Beurre de Capiamont, Compte de Lawry, Buffum, Seckel, Knight's Monarch, Bartlett, Femish Beauty and Napoleon. Many of these are on quince roots.

I observe that your correspondent, Mr. PARDEE, distinguishes between the fertilizers which produce the vine, and those which promote fruitfulness in the strawberry. I visited Doctor BAYNE in October last, and procured, in his neighborhood, a few genuine plants of Alice Maud Strawberry. I planted them out in November, and they have given me nothing except most luxuriant vines. They were treated with guano and barn yard manure. Burr's Mammoth, planted at the same time, but not highly manured, has produced fruit abundantly. Perhaps I have fallen into the very error to which your correspondent alludes. With other varieties I succeed well. Doctor BAYNE's cabbages, of which he speaks, had probably ceased to grow, before they were overtaken by the severe frost of the last most extraordinary winter, and were indebted to that circumstance for their preservation. The thermometer stood with us 26 degrees below the freezing point, and I lost hundreds of cauliflowers and cabbages, all in a growing state, and either headed or heading.

I had rose bushes, for the first time in my life, killed to the ground, and Lilliputian Chrysanthemums, which I planted out in November. These plants were all in a growing state, and I suppose on that account were killed. Every Fig tree I own, embracing eight or ten varieties, was killed to the ground, with the exception of a variety known here as the Celestial, but which I think is the Angeline. Almost every peach tree was injured

on the same side of the trunk. I cannot impute this to the sun of last summer, as some which have suffered most were shaded by branches reaching to the ground.

Two questions now, Mr. Editor, and I have done. What is the "sulphate of ammonia?" Not a druggist in the little town in which I live, knows anything about it. I should like to know by what name to order it, the form in which it comes, and its probable cost. [It is only to be had of the wholesale druggists in the cities. Ed.] How does it happen that particular soils are recommended for some varieties of the Pear? Should not the soil be adapted to the *stock on which we work*, rather than to the *tree we aim to produce*? [Certainly, to the stock. Ed.] Our success with the pear on the quince in heavy soils would indicate this.

TESTIS.

July 10, 1892.

We are much obliged to our correspondent, in whom we recognize one of the best cultivators at the South. It gives us a new feeling of the breadth of our country, to know that before strawberries are ripe at the northern part of the Union, peaches are in perfection at the other. Our correspondent's trouble with his peaches—i.e., their breaking down with the abundance of fine fruit, will please the fancy of some of our British readers who find it hard enough to make the fruit hang on at all. Ed.

CRITIQUE ON THE JUNE HORTICULTURIST.

BY JEFFREYS.

American versus British Horticulture.—Out of rule, Mr. DOWNING. Don't you know that our new "Code of Practice" has expunged the *versus* altogether from the title's of causes? However, as you are not a lawyer, you will hardly be "thrown over the bar" for wrong pleading or mal-practice, in the Court of Horticulture, unless it be for the very truth-telling habit you sometimes indulge in, a specimen of which we have in this article.

If our people who require the services of foreign gardeners, would only do themselves justice, one-half of the intollerable exactions that are made upon their purses and their patience, by sundry of those imported empirics, would be abated. Of "Native American" gardeners, we have none. Gardening is too "piddling" work for them. "Cut and burn" is the meaning of the word "improvement," over a great part of the United States, while plant and prune may be the work of some less enterprising, and more painstaking ones than themselves.

Gardening and professional gardeners, are, in fact, subjects of modern introduction, to any extent in the United States; and in but few of the states now, is professional gardening considered of much account. The only "gardener" I knew in my boyhood, was a superannuated old negro, with white hair, and eyes so old that a little halo of gray encircled their pupils; and this worthy old African, called Cudjoe, used to itinerate over the neighborhood soon as the early spring broke out, and as he knew the difference in the soil and locality of the dozen or twenty gardens, which he had for the last forty years annually made, he took the warmest and earliest places to begin with. His *role* of "doing up the garden," consisted mainly of sowing a few lettuce seeds in an early border; an onion bed laid out in "square," and a row or two of early peas. This being done, his labors were dispensed with, except that the "young Missuses" might now and then want a posey bed for their "four o'clocks" and "Marigolds," when old Cudjoe's services might be spun out for another half day. After all they were pleasant times, and many snug gardens,

stored with excellent vegetables, and decked with pretty flowers, succeeded the quiet labors thus began by the harmless old negro.

Since then we have "progressed." Now we want extensive gardens, hot-beds, green-houses, and all sorts of queer conceits requiring the continued labors of skillful men—the "continued labors" we get, as the collapsed condition of our purses testify; the "skillful" part is altogether another matter. The simple truth is—I must blast it out—we Americans do pay through the nose, most outrageously, in most cases, for our gardening, and the majority of it villanously bad at that. I have tried many "gardeners," myself, and I never tried one who made great professions of what he had "done at 'ome," and had been in high practice there, but what vilely cheated me—that, probably, was my "luck." Others, perhaps, found better; yet I have been most successful when I found a plain, laboring man, who had been nothing but an "under laborer" in good gardens abroad, and made little or no pretensions of skill, and was satisfied with moderate wages. Among such, I have found now and then, a faithful, skillful man, who, in his plain and quiet practice, knew more than a score of your vamping, empty "professors."

Nor, so long as things go on as they do with our own people, do I see any help for these difficulties. We must *know something* ourselves, and then, with such "help" as we can get, rub along in a very plain way, and enjoy what we can of luxury in the enormous proportionate expense which we pay for it. Let it be understood that my remarks are not intended for *all*. We have many good gardeners among us—honest men, and skillful, who are thoroughly taught, and practice on sound principles. Such men deserve and meet with abundant encouragement, either in the employ of others, or when in business on their own account. I wish a few more "professional" gardeners would read the Horticulturist. It would be to their benefit.

Effect of the Severe Winter on rare Evergreens.—With all my heart I wish we had more such men as Mr. Sargent. Men who will try things, and then, after trial, tell us what they have amounted to. Many a man of taste is disposed to try a new plant, or a variety of plants in his grounds, but on thinking the subject all over, his fear of failure overcomes his zeal, and he prudently buttons up his pocket and concludes to save his money and his solicitude, rather than hazard both on a doubtful issue. These notes of Mr. Sargent are particularly valuable for several reasons. His position is a central one, exposed to great vicissitudes of change in temperature. His soil not *naturally* inviting and grateful to the evergreen family at large. His variety extraordinarily extensive for this country—and the past winter, from which his notes are drawn, the most severe of modern date. These circumstances combine to make the notes of Mr. Sargent, with the editorial memoranda accompanying them, of exceeding interest to all evergreen planters.

Microscopic insects the cause of Pear Blight.—No, sir. We fear growers cannot admit that doctrine yet. The work of insects always gives token of mischief before the work of death is done. The pear blight does no such thing. You may walk out among your trees at evening, the branches fresh with the greenest leaves, and the young twigs in their most succulent growth, and the next day noon will show you one of the same branches withering, brown, and dead. That is *fire blight*. We know not what strange anomalies exist in Illinois, above and beyond our other states, but if report be true, the "old French pear trees" of Kaskaskia, and other early settlements of that state, are now as fresh and luxuriant as those of Detroit and the river Raisin. Let us wait a little and see what our other pomologists have to say upon this *new* theory of Prof. Turner.

Great variety of Native Woods.—It is amusing to an intelligent man who has much intercourse with our landholders and farmers, to note how little the most of them know

of the prodigious forest wealth with which they are surrounded, even on the soil owned by themselves. Go to a man living in our middle and western states, and ask him how many varieties of wood grow upon his estate, and he will, in all honesty, tell you that he has perhaps a dozen altogether, and these comprise such as he makes into his ox yokes, whippletrees, sled crooks, hoops, handspikes, withes, whip-stocks, framing timber, boards, rails, fence posts, and fire wood; and if there be any more varieties than these, they might as well grow at the north pole as on his own territory, so far as any interest which he takes in them is concerned. Now, it appears that this little peninsula of forty acres, on examination, produces sixty species of native woods! What a wealth of tree vegetation on so small a spot! And yet, this piece of ground is sterile, compared with many of equal territory to be found in the United States.

"O! would some power the gift give us,
To see ourselves as others see us,"

in the wealth of our extensive and luxuriant forests! Bartram, Michaux, and Nuttall, with all their research, have not revealed the extent of our woodland treasures, and there is yet a wide and a new field for the naturalist unexplained in the vast solitudes of Oregon, New Mexico, and the Californias. Even the bleaker and inhospitable shores of Lake Superior abound in woods new to our books, which may yet reveal to us productions of surpassing interest. It is gratifying to see, now and then, in your columns, our attention directed to such rich and refreshing subjects.

Evergreens—their use and Culture.—If Mr. Richardson preaches as well as he writes, his hearers are to be envied. There is a positive unction in this article that goes to the understanding, if not to the heart, of every one interested in growing evergreens, or who loves country life at all. His treatment of this subject is thoroughly practical, and as simple as practical; so plain, and seductive withall, that one can hardly resist the disposition to go forthwith into a sturdy plantation of firs and cedars.

I have thought a thousand times of the great additional good which our country clergymen could do, in the way of their "duty," if they would cultivate a love for horticulture and planting, and preach that, on week days in their parochial visits among their people, as episodes interspersed among the "more important subjects" usually confided to their charge. I have, in the course of my life, known some country clergymen, long resident among a rural population, whose influence in such subjects have been most beneficial and lasting. Beautifully shaded avenues, luxuriant court yards, delightful flowers, grand overshadowing trees, blooming orchards, and rich gardens, have grown up under their teaching, and the influences of their refined taste, equally with the pure morality and sincere devotion which surrounded the altars of their own hallowed sanctuaries. How delightful and salutary the influence of such a man among an improving people, and how many of the rural paradises of our country can point to the labors of a faithful pastor, as one who taught them, both by precept and example, how to create the beauty and the luxuriance with which they are surrounded! The very subjects which so deeply interest his calling—his early classic studies—his daily readings of volumes in which the most exalted lessons of instruction are illustrated by reference to objects of surpassing interest and beauty—his simple, natural, yet cultivated taste; all these draw his thoughts into a deep love and attachment to the harmonies of creation, which, if he be a man fit for his calling, cannot but tell out in such works of grace and embellishment. Labors like these, constitute a marked feature in the "daily beauty" of a pastor's life, and more forcibly illustrate that purity of purpose, and sanctity of example, which should, and do in so many familiar instances, signalily distinguish the life of the country clergy.

I must even, while in the vein, refer to the many eminent men, scattered all over the United States, distinguished in the several neighborhoods of their residence for their fine taste in gardening and planting, as well as for their more popular attainments, who received their school-boy education at their home firesides, and whose minds and tastes, were formed under the teachings of the devoted clergy of the rural parishes of our older states, at whose "studies" they daily or weekly attended for years, while deprived of the advantages of public classical schools in their own secluded neighborhoods. Their restricted means did not permit them to enjoy—fortunately for their own success and fame in after life—the advantages of "academical" education; but with strong minds, sound hearts, and determined purposes, they went forth into the world, from the wholesome teachings of their parish "minister" to become, in due time, the strong men of our country.

Things are not so now—and none the better that they are not. Were they so, we might witness less brilliancy, but more integrity, honesty, strength and virtue. God bless the country clergyman!

Sacred and Classical Planting.—No one can read this delightful essay, and meditate upon it as he reads, without breathing freer and deeper, and rising up a wiser and a better man. Our deepest associations of sublimity, grandeur, and beauty in natural objects, are drawn from the writings of inspired men. The Pentateuch, the Prophecies, the Lamentations, the Psalms, the historic records of the Old Testament, all abound with the grandest, as well as most delightful illustrations of which the mind has ever conceived; while the simple and touching narratives of the New Testament, abounding in similitudes to natural objects, surpass in simplicity, in beauty, and directness, any uninspired book of ancient or modern time. A thousand examples might be quoted in proof; and let him who doubts—if haply, such there be—go search the Sacred volumes, and there ponder and admire.

The Next Pomological Congress.—Now that every fruit grower who has attended the meetings of this body, has had his own particular hobby recognised and put into print, I trust that some *methodical* system of action is to be adopted to govern their future proceedings. Various reports will probably be presented for examination; some pertinent to the object, some the reverse—some pure grain, and much chaff. Let strong committees of reference be selected, who can separate the one from the other, and report only what is valuable, and to the purpose. The varieties of fruits themselves, their best localities, soils, positions, climates—all indeed, appertaining to them, should be discussed, considered and settled, so far as they can be. Much has been already done—finished, indeed, so far as the subject can admit of it, and *new* matter should now come up for consideration. Philadelphia is a most favorable point for the meeting, and large delegations from many of the states will be in attendance.

Such gentlemen as have had experience in the previous meetings of this body, may give to this convention great directness, and the results of their deliberations may be of exceeding value. Let a plan early be adopted for publishing the *gist* of their labors in a book form, which need not be expensive, and its treasury will be liberally repaid from the sales which may be made of its copies. If this body is to be continued, and hold future annual or biennial meetings, it should have its "Transactions," as much as any State Agricultural Society; and if got up as they should be, the record will be indispensable to every pomologist and nurseryman, in guiding his future practice.

An English National School-house.—A quiet, quaint, homelike affair, which, under the deep shade of ancient Elms, looks the very spirit of repose and meditation. But there

are too many buttresses and leantos about it, to suit our "fast" notions in America, and it will rarely, if ever, be copied out of England. Besides that, the gables should be more deeply sheltered by the projecting eaves, indispensable to the due protection of the walls in our climate. With such addition, it would be a fitting model for a country school house in this country.

Dr. Valk's Native Grape.—The July Horticulturist having come to hand before this, I shall reserve what I have to say on this grape, to couple it with the new seedling of Mr. ALLEN, of Salem, Mass., and perhaps another new thing or two of the sort.

Glover's Models of Fruits.—In these beautiful and useful specimens is shown what a gentleman of taste and leisure can do—partly for the amusement of his leisure hours, and incidentally to furnish such

"Imperishable types of of evanescence"

to all who love to see their favorite fruits in perpetual color and bloom before them. Such specimens should be in the possession of every society who have cognizance of fruits, and Mr. G. is entitled to the lasting gratitude of every pomologist, for his ingenuity and patience in producing them.

JEFFREYS.

ON SUMMER PRUNING HARDY GRAPES.

BY C., LOUISVILLE, KY.

DEAR SIR—In the August number of the Horticulturist for 1846, you present Doctor Lindley's theory of pruning grape vines, and recommend as the result of your experience, the omission of summer pruning—neither to remove the laterals, nor to stop the fruit bearing branches, unless the vines be too thick, when you remove a portion of the branches with the fruit entire. Has any recent experience induced you to modify or change the opinion there expressed, respecting summer pruning in open culture? Your correspondent "H. G.," in your last number, on the culture of grapes under glass, directs the shoots to be "constantly stopped a joint or two above the fruit." This severe pruning is no doubt required under glass.

Mr. LAWRENCE YOUNG, a horticulturist of some experience, in the May number, page 208, speaks of severe summer pruning of the fruit bearing and lateral branches as the only correct practice, acknowledged to be so by all Cultivators, and says that "every body does or may know it to be the proper culture." The writer of this is not satisfied that the culture is correct, though he has given the subject attention during the last eight years.

One of our successful cultivators on a small scale, has grapevines in this city, twenty-seven years old, reared from cuttings by himself, which are planted seven feet apart, trained to an upright trellis eight feet high; these vines are pruned in the spring, on the renewal system, allowing three or four canes of the last year's growth to remain, which are trained in short curves, at full length to the trellis; other branches he cuts down to two eyes, to form bearing wood for the next year, then he permits them to grow in a straight diagonal direction until they reach the top of the trellis, when he bends them over and stops them after they have grown about eighteen inches in a downward direction on the opposite side. All the wood that has borne fruit is cut out the following spring. The fruit bearing shoots from the wood of the previous season, are allowed to grow freely until they reach the top of the trellis, when they are stopped, the lateral shoots from these are not stopped or cut off.

The only summer pruning the vines receive is that above described, together with the removal of a few leaves when they cause too dense a shade over the fruit. His Catawba and Isabella vines, are confined in a space of six feet by eight feet high, and are every season loaded with fruit, from within eighteen inches of the ground to the top of the trellis. The berries are of good size, though the bunches are not quite so large, as may be obtained when a Catawba vine is permitted to run twenty to thirty feet, and bear its fruit on the end, as some amateurs here fancy to train their vines, the bare stems having the appearance of old cordage hung about from prop to prop, with a mass of verdure attached to the end. In return for this unsightly mode of culture, they certainly do obtain a few larger bunches of grapes, than I have seen produced in the open air under any other mode of culture. You will oblige your correspondent, by saying whether the experience of the past six years has changed the opinion of the mode of summer pruning, recommended in your journal in August 1846.

Respectfully,

C.

Louisville, Ky., July 9, 1854.

Our opinion relating to vines out of doors is substantially the same: that is to say, we advise every leaf to be left, and only stop the fruit bearing branches when they become so long as to become unmanageable—i.e. fill up the trellis or stake too much. The severe system of pruning out of door vines is both unnatural and unsuited to our climate. Under glass the vine is placed under artificial conditions and may be successfully subjected to various modes of pruning and culture.

In cultivating Isabellas and Catawbias for fruit (not wine) in the garden or field, two things are most important. The first is to give the roots—to the very ends—in the autumn, an immense top dressing of *stable manure* (digging it in well,) for no tree needs so much animal matter as the grape; the second is to prune the vine very closely, carefully and thoroughly in the early spring or at the close of winter. These two things will always secure a fine crop of very large fruit. Summer pruning is only a secondary—though still important matter. Ed.

THE GOLIATH STRAWBERRY.

AMONG the various new strawberries that have been tested for two years past, the Goliath appears to be the finest of that class usually called *Pine Strawberries*.

We believe the Goliath is a German variety, introduced into this country by Messrs. THOMAS HOGG & SON, Yorkville Nurseries, New-York. At any rate, our first acquaintance with it was through some plants sent us by these experienced and skillful nurserymen—who commended the sort to us as one which had acquired reputation on the continent, and promised well under their own cultivation.

The advantages of the Goliath over most of the Pine strawberries, appear to be its greater hardiness and adaptation to our climate. We have found the plants to stand the past severe winter well, without any protection, and to bear an abundant crop. Notwithstanding this, we would recommend a mulching of tan-bark two inches deep, as calculated to improve both the vigor of the plants, and the size of the fruit.

Our neighbor, Dr. HULL, (of whose success in strawberry culture we have repeatedly spoken,) has grown the Goliath to very great perfection this season, and the sketch of a cluster of the fruit of this variety, which we give in the annexed figure, is one taken from his plants. The remarkably high vinous flavor of the Goliath, added to its hardiness and

vigor, will, we think, cause it to be sought after by amateurs. It is superior for general cultivation here, to any Pine we have tried, with the exception of the British Queen—while it is hardier than the latter fine variety.



Description.—Fruit large, ovate, pretty regular and uniform in size, (not cockscomb shaped;) surface of berry not highly polished; seeds only slightly imbedded; color, rich red; flesh, solid, with a high vinous flavor; quality, first rate in all respects. Fruit stalk tall, strong, unusually hairy; calyx quite hairy. Leaves borne upright, on long, rather slender stalks. Hardy, and bears abundantly. Ripens at middle season.

ILLINOIS HORTICULTURE—INSECTS—PROF. TURNER, ETC.

BY DR. KENNICOTT, NORTHFIELD, ILL.

DEAR SIR—In your July number, I find a letter from that excellent western pomologist A. H. ERNST, of Cincinnati—commenting on Prof. TURNER's discovery of insects, supposed to be the cause of *blight* in the pear, &c.

I had the pleasure of reading the Professor's June article, in his own house, at Jacksonville, and I also examined his apparently healthy remnants of a noble lot of pear trees, cut up by the blight of preceding summers. He could show me no vestiges of his "pear

tree fiends," though he thought that their presence could be detected by a blotched and slightly diseased appearance of the foliage.

I would say, at the commencement, that I am skeptical on this subject of the insect origin of blight, and believe with Mr. Ernst that we are to look to the sudden and extreme changes of temperature, and perhaps other meteorological phenomena, for the immediate or exciting cause. But I do not believe that the enfeebled constitution of foreign trees is the only, or chief predisposing cause—for our native as well as foreign shrubs, and hardy indigenous trees are subject to its attacks.

There is, as yet, no blight in my vicinity this summer, except in the burr oak (*Quercus macrocarpa*) and it is due to the believers in the insect theory, that I state the fact of the comparative absence of most kinds of injurious insects in the orchard and garden—the scaly aphid excepted. We have had very few rose bugs even—not one where we formerly had one hundred. And this was the case during my recent visit to central Illinois.

There was, however, plenty of blight about Springfield, and regions north, though none that I saw in Prof. TURNER's neighborhood. I therefore fear that his exemption is accidental, rather than owing to his zealous manipulations and varied applications to the bark of his trees.

Professor T. deserves great credit, nevertheless, for his untiring exertions in this connection, and his very careful and expensive experiments. Profit to himself in this matter seems to be lost sight of, in his ardent determination to add something important to the science of Horticulture. And yet, Prof. TURNER is a money making man. He will pardon me for this statement, because it is the best evidence that one can offer the world, of any man's practical talent, sanity, and sound orthodoxy. It is proof positive that he is all right, thought it has been the fashion among "the Doctors" in Illinois, to style the professor "a reckless innovator and a wild visionary"—especially in regard to "a plan for an Industrial University for Illinois"—for noticing which, as you have done, we of Suckerdome can never feel sufficiently grateful or thank you too much.

Now, whether Professor T. has made any new discovery in entomology or not, I cannot say—for I have never studied this most important science, and though I sought it, have not been able to procure a copy of Dr. HARRIS' Treatise on Insects; I trust, however, that his new edition will be sufficiently large to enable western fruit growers, and the many reading farmers who have recently inquired for it, to obtain copies. But friend ERNST will permit me to assure him of one thing. Professor TURNER's "mite of mould," which he presumes to be the nest of his "Pear Devil" is not the "bark louse." The scaly insect does not attack the pear tree—at least not here—though the apple is often perfectly encrusted with these scabby little pests. The white scale insect is found on stunted apples and pears too, but I saw no signs of them on the trees about Jacksonville.

Still it is possible that this insect and the nest seen by Prof. T. and Dr. ADAMS, are well known to entomologists—for though the one is a very learned man, and a most patient and persevering observer, and the other one of the best chemists in the west, and a man of great general scientific information—yet I am not aware that either makes pretension to an intimate knowledge of entomology—and I am compelled to doubt the deductions of Prof. T., while I admit them to be very plausible and even possible.

While writing (as my intended brief note has already grown to a letter,) permit me a word about your able Illinois correspondent, and the rich central Illinois region, which I do not remember that he has described, though he resides in its most favored spot.

Though an old correspondent I never met Prof. Turner before—and, as many of your

readers may have done, I had formed no correct idea of the man. I had been told that he was a "hobby man,"—"a visionary theorist," and all that sort of thing—and perhaps some of your readers may have thought the same, for he never hides his opinions; and their singular boldness, if not originalty, and his forcible manner of stating them, have startled his brethren, the school-men, and they are, consequently, more inclined to fear than to love him, though he has really made an hundred friends to one enemy; and if they would only read him right, and "the signs of the times" too, they would see in him as great a friend to religious institutions, and polite letters, as to practical and scientific education.

J. B. TURNER is a thoughtful man, but no "visionary"—an innovator—but no "leveler." He is not even an enthusiast—but an earnest scholar—a learned and pious theologian—strict in his example, and yet liberal in his views; and the most *earnest* and unselfish man I ever knew, in his desire to give the producing classes a liberal education, suited to their wants, and to the practical requirements of their several vocations.

I wish his detractors knew him as he is. I wish your readers could see his little place, and his manangement of it. His implements and machines, most of them of his own invention or improvement, and the manner in which he uses them—and how much he makes of, and how much he makes *from*, a few acres. They would then see that he is just the sort of a man to write for the Horticulturist, and the man to evolve and develop great practical thoughts, and to sustain them.

Jacksonville is the city, par excellence, of public edifices, and the great state charities. It is the classical town, and with many, the show town of Illinois; and it is a most lovely spot—though here, as elsewhere—

"God made the country—man made the town."

The country is rich and beautiful, beyond the power of words to describe. The red drift, or diluvial soil, is astonishingly deep and productive, *twenty successive crops* of Indian corn, (60 to 80 bushels to the acre,) having been taken from the same field, *without manure*.

The face of the country is not broken, nor is it rolling, but just sufficiently sloping for easy culture, with an occasional elevation to break the vastness of a prairie view, which too often stretches away beyond sight, unrelieved by hills or trees.

Here, however, are some "mounds," and a plenty of timber, bordering the still streams, and clothing the range of elevated land which encircles the town, in the richest and most graceful dress imaginable.

We have no *picturesque* spots to speak of, and few trees of the picturesque type, though no country can surpass ours in the *graceful* school of trees, and in the gentle curves and swelling outline of much of our prairie land—its vastness and sameness being at once its principal beauty and defect. But about Jacksonville there is nothing like monotony—the landscape is varied, and the variety of trees and their forms, and the changing face of the general surface, are enough to prevent any idea of sameness.

Maples, Elms, and six noble sorts of Oak, make up the great mass of trees, and yet there are so many others, especially of the smaller sorts, that a prairie "island," or a "timber" border, resembles the show grounds of some old nurseries East, with specimens of nearly every beautiful and graceful deciduous shrub and tree.

But enough of the country—except the HEDGES, and not much of them. There are hundreds of miles of new Maclura, or Osage Orange hedges, through the whole of this central Illinois region—and yet, I saw but *one* that would turn stock of all kinds, and that had grown up too rapidly, and not thick enough at bottom for future use. Prof. T.

has some hedges commenced *right*—they turn chickens, and would almost turn a rat now—and hereafter they bid fair to be as impenetrable as a brick wall, and as formidable as a hedge of Cherokee rose, in Louisiana.

The great fault every where committed, is in *not cutting back enough*. The hedge looks dense and formidable at two or three years old, and the proprietors "*hate to mutilate it.*" But they *must cut* and keep cutting, or they will never have a fence—that is clear to me—and yet, except upon Prof. TURNER's grounds, I did not see ten hedges that had been half cut—nor three that had been cut enough. [Quite right—for the first three years the only thing is to cut down the hedge, till it gets thick at the bottom. ED.]

There were, as near as I can learn, about 30,000,000 of this hedge plant raised in Illinois, last season, and there will be perhaps fifty millions this—and these will make a "right smart chance of fence, if well planted and severely cut back—but I fear ten planters will curse the plant grower, where one will bless him; and all from their own neglect or folly—for I know that most dealers in hedge plants are very particular in their directions to "cut and keep on cutting." Almost every promising native or foreign plant has been tried for hedging and all abandoned, or nearly so, except the Osage Orange; and I fear the majority of the existing hedges of that will prove a failure, from the fact abovementioned, and not from any fault as yet discovered, in the nature of the plant itself, or in our soil or climate as regards its cultivation.

I noticed among trees that had been parts of a hedge once, the Honey Locust, (*Gleditsia*), and in Prof. TURNER's grounds are several tall specimens of the thornless variety—a half picturesque and very desirable tree. I did not see it with the moon-beams sifting through its feathery foliage, but the Professor described the sparkling shower of light thus produced, as most delicious, and entirely unequalled in its singular appearance. This variety should be oftener planted.

The architecture in Jacksonville, I ought to say before closing, is not of a high order. Many faults, and some bad ones, in the old public edifices—but better taste, and more knowledge, are shown in the new.

There are many new suburban cottages, a credit to the place. I asked the origin of so much taste, and was told that all might be traced directly to your COTTAGE RESIDENCES and the HORTICULTURIST. A compliment to you, Mr. Editor, and well deserved. Truly your friend,

JOHN A. KENNICOTT.

The Grove, Ill., July 10, 1852.

GREEN CROPS FOR MANURE.

BY JAMES GOWEN, MT. AIRY, PHILADELPHIA.

A. J. DOWNING, Esq.—Dear Sir: On the score of sound practice in agriculture, rather than of courtesy to me, I claim the privilege of saying a word in relation to the strictures in your last number, upon my remarks on "Green Crops as a Manure." I do not complain that you took occasion to animadvert upon anything thing you found worthy of noting in my Agricultural Address at Lancaster, being well aware that it was perfectly at your option to single out for comment, whatever you might deem objectionable. Acknowledging, also, that I have no right to expect every one should concur in my views, upon a matter as susceptible of a difference of opinion, as the condition of farms and the position of farmers differ—the circumstances being the rule by which to determine the necessity or propriety of turning in a crop to serve as manure.

In my address, in which the turning in of green crops was merely incidental, it could not be expected that the special cases, justifying a resort to such manuring, could be enumerated—I could but deal with the subject in a broad and general sense, and from a long and close observation on the practice of husbandry, a sense of duty constrained me to denounce the custom of raising crops to be plowed under, as “time wasting and land cheating.” No one, not even yourself, Mr. Editor, can have a higher appreciation of vegetable mold than I have, and I challenge New-York, or any farm in Pennsylvania, to show better sods on uplands, after having yielded for as many years, heavy crops of hay, than I can now show upon my place; and may safely add, that I am yet to meet the man who would rejoice more in having such a sod to turn under, when it becomes necessary to break it up; but with all this appreciation, I would not rely upon it to bring me a crop of grain, potatoes, &c., without the addition of what is known among farmers as “barn-yard manure,” notwithstanding such a sod would be richer and more enduring than the “scant crops of partly grown clover, buckwheat, &c.” which I pointed at as unworthy the name of manure. Had these fields I have mown for some seven or eight years, been laid down in 1833 and 4, with only clover or buckwheat, and the like, turned in, would they, as they did, have yielded forty to forty-five bushels of wheat to the acre, as first crops, and cut ever since close on two tons of fine hay, on an average, to the acre?

Assuredly not. In the course of two or three years at farthest, the crop of clover growing, would be required to turn under, to serve as manure for a grain or some other crop, involving prematurely the labor of breaking up, seeding, &c.; and what would be the condition of the land, and the character of the crops, after another two or three years shift under such a practice—I allude to such soils as we cultivate? It was in view of this system that I said, “in whatever place it is practiced, however strong the land may be at the start, the system, if persevered in, must inevitably bring the land, its owners, and the country, into a state of poverty. No good husbandman would think of pursuing such a course.”

If the address had been fairly read, its general bearing and scope properly considered, it might, perhaps, have saved you and others from drawing the inference, that I held clover and other green crops worthless as fertilizers. I never so thought, nor did I intend to be so understood. I knew clover would in some degree serve the purpose of manure, and so would potatoes, wheat, rye, barley, &c. &c., but I knew also that these, as clover, would be costly and but indifferent manures, compared to barn yard manure, peat, and putrescent substances, which if not used to enrich the land, would become pestilential nuisances; for we must have cattle and other live stock—while offal and other offensive matter would be constantly accumulating. Insisting, as I did, upon the crops going to the barn, to be put to their proper use, and the offensive matters applied, as they should be, to the land; and in this, who shall be so unthinking as to say, I was wrong? Moreover, I had been grieved to perceive a germ of quackery springing up with our efforts at scientific agriculture, and while I attempted to awaken the good farmers of Lancaster to a proper spirit of improvement, I took occasion, husbandman like, to caution them against nostrums and humbug, urging a chief reliance upon the cheap and excellent manures so easily obtained in and about their barn yard and premises.

To the question whether I have seen the statement of Mr. MORRIS, in regard to his premium farm—I answer that I have; and, instead of condemning his practice, have simply to say, that had I been in his situation, I might, perhaps, have resorted to the same means, he had recourse to for the improvement of his land. But did Mr. MORRIS depend solely upon the turning in of green crops, pending the process of renovating it? I presume he

used other manures, which with gypsum, aiding in restoring his farm to good condition. But this case, and and others I have heard of, do not affect the force of the injunction against a persevering system of turning in grain crops as a substitute for manure. It may be that this very land that Mr. MORR found so wretchedly impoverished, when he took possession of it, owed much of its poverty to his predecessor having followed more closely the appliances of clover, buckwheat, &c., by way of manure than Mr. MORR did—one thing at least is certain, and that is, the impoverishment was not owing to the former owner or tenant having been too liberal in the application of barn yard manure.

Now the best way to test the soundness of my views, as to the system I so deprecated, would be, for some one having a farm in such good condition as Mr. MORR's is now found to be in, to follow the green crop system thoroughly for five years, discarding the vulgar practice, if you please, of husbanding barn yard and stable manure. To note the seasons consumed in raising the crops to be turned under, to produce the "carbon," "oxygen," "nitrogen," &c.—the simon pure fertilizers required to grow the wheat, rye, corn, potatoes, &c. &c., for the barn—to keep an exact account of the value of the crops so housed, together with the sum total of the expenses of the farm, and then to exhibit the net gain in the "yellow boys" that are now jingled in "Mr. GOWEN's" ears, to convince him of the profits resulting from the turning in green crops instead of manure; and if such a system, on such a farm, at the end of five years, leaves the purse well filled and the land in as high condition as at the beginning, I shall not only confess that I was wrong, but be willing to pay a premium of half the value of the farm to the husbandman who had worked such a miracle.

Let it be rembered that it was such land, as this, not worn out land that I had in view, as may easily be perceived by my remarks, for how could the land be brought "into a state of poverty," that had not been rich, but in poverty already? If, Mr. Editor, you will take the trouble to again glance at the address, from which you have predicted that if I go on at the rate you infer I am going, I will, as you say, "demonstrate that there is no warmth begotten by sunshine," you will be led to believe at least, that I am in but little danger of dealing in moonshine. Your obedient servant, JAMES GOWEN.

Mount Airy, Philadelphia, July 19th, 1852.

REMARKS.—We like the straight-forward spirit of Mr. GOWEN's remarks, and find by them, that in the main point at issue we are entirely agreed. That is to say, if Mr. GOWEN simply wishes to affirm that there is no comparison in the value of barn-yard manure for keeping a farm in heart, and green crops, we say Amen, with all our heart. No person has a firmer faith in the value of barn-yard manure, than ourself, as we believe that with plenty of it, and the knowledge how to use it, one might smile, even at the bottom lands of the west. But, as Mr. GOWEN will not deny, that the said bottom lands are the most fertile lands in America, will he do us the favor to ask himself how they became such a store house of fertility? By the deposit and decay of animal remains? No. By the annual deposit for hundreds of years, of vegetable remains? Assuredly. Nature has been plowing in green crops every year, on those bottom lands, till they are most undeniably rich.

So far we think Mr. GOWEN will agree with us—that there is virtue in decaying and decayed vegetation buried in the soil, whether in the shape of clover plowed in or otherwise. But we now suppose from reading his remarks, with which he has favored us, in the above communication, that we have probably misapprehended him in another way. Mr. GOWEN is not only a good practical farmer, but an excellent teacher of husbandry, and in Pennsylvania and the states south of it he notices that farmers neglect their barn

yard manure to follow the new fangled fancies of plowing in green crops, using mineral manure, &c. He accordingly tells them that green crops, under such circumstances, are not worth their attention, which ought to be devoted to the permanent enrichment of their lands by the use of animal manure. And the advice is the best of advice. We look upon barn yard manure as the solid bullion, green crops, gypsum, lime, &c., as the paper currency of husbandry. But in many parts, we were going to say most parts of the country, the bullion is scarce—is only to be had in very limited quantities—so that not a half or third of the farm lands can be well manured with it. In such a condition of things a farmer who wishes to mend his land and not lose his profit, will, we think, occasionally employ the paper currency to maintain and restore the credit of certain fields that would come to a beggared condition, if they had to wait for the bullion. Barn yard manure, we say with Mr. GOWEN, before everything, but if we can't get enough of it, then we must not despise what the experience of so many good husbandmen has proved of decided benefit—green crops ploughed in. Ed.

A TALK ABOUT PIGS.

BY L. F. ALLEN, BLACK ROCK, N. Y.

"PIGS! And what, I should like to know, have pigs to do with horticulture?" says an intelligent reader. Why a good deal to do with it, when a sharp-nosed street grunter of the Alligator tribe creeps under your fence, or through your gate, which some straggler has, perhaps, left half way open, and roots up a fine growing border of Dahlias just getting into bloom, or a bed of choice Tulips in the full opening of their luxuriant colors; or, in a better way, the domestic, quiet dam, and half a dozen little chubby responsibilities which you have turned into your plum orchard to destroy the Curculio's which so incessantly murder your fruit. In this last employment, your well-bred pig is a useful creature, and well tended, and properly secured from mischief, is rather an interesting animal than otherwise.

Pigs have been wonderfully improved in England within the last fifty years, and England is the country, except in fine woolled sheep, where the best of all our domestic farm stock is obtained. Let it be known, also, that many of our merchants and gentleman who live in cities, and have fine country places, have shown much more spirit and liberality in sending abroad, and getting such things for the improvement and benefit of the farmer, than a thousand of the very farmers so benefitted would show of themselves, and who usually give little thanks, even while acknowledging the benefit, to those who confer it upon them. For myself, however, I intend to make an exception to this truth, in the case now in hand.

Among my friends and acquaintances in New-York, is a merchant, an Englishman, but who has complimented the land of his adoption in the highest possible way, by marrying an American wife, and cultivating a beautiful little farm in Newtown, on Long-Island, where he resides. This gentleman has a taste for fine animals, and next to his carriage horses, nothing composing his outside family gives him so much pleasure, as to look upon his beautiful Short-horn cows, of which he has several, his Middlesex pigs, and his Dorking fowls. In returning a visit of his of some months previous, I last winter drove over with my friend, and spent a night at his most agreeable home. Being an active business

man in the city, I little dreamed that he had cultivated so nice and discriminating a taste for farm stock, and supposed that I should meet with some very tolerable things at his place, in the way of cattle, pigs and chickens; yet the *last* I knew to be good, for he had among them some of the choicest of a previous importation of my own. The *first* I also knew were fine, for he had selected some choice creatures from a herd into which I, myself, had dipped at a high figure. These were examined, commented upon, and praised as they deserved; but usually regarding a pig as a thing to be kept in a pen, out of sight, fatted, slaughtered, and put out of the way, I took less interest in them; yet learning they were remarkable in their way, I went with my friend to their sty—a proper, well arranged apartment, adjoining the stables; and what a sight! I no longer wondered that PRINCE ALBERT, the illustrious spouse of England's Queen, breeds Middlesex pigs, and takes prizes with them at the Royal Cattle Shows. There were the original pair imported the previous year, with their brood of nine young ones, fat as squabs, white as pigs could be, and more beautiful in shape, and more perfect in style, than one would suppose a pig could be bred—all of the true "Prince Albert" stock. Why they really looked innocent, and in no manner of descent from the herd which ran into the Sea of Gallilee when possessed of the devil, some eighteen hundred and odd years ago!

It is needless to talk further about the pigs, for I fell so much in love with them that I dreamed of them half the night, and nought would do but my friend would have me accept one of them to take to my own place, with which to improve my own stock, although I had thought that my own were about good enough. The matter was soon settled, and a pig I was to have, when the navigation opened, and he could be safely sent to me. In due time I received him, and although I had never looked upon a thing of the swine family with particular complacency, the quiet temper, docility, and beauty of the creature has now won all my prejudices, and my pig is one of the prime favorites among my farm stock.

Finding his stock too large for his farm, my friend, a few months afterwards, sold his imported pair, and a part of the young ones to Col. J. M. SHERWOOD, of Auburn, who now keeps them, and declares that, although he had the best of pigs before, he never saw anything to compare with them. For introducing these beautiful pigs into the country, Mr. JOHN C. JACKSON—for that is the name of the gentleman—deserves more credit for good works than half the politicians in the country put together.

Now, as the pig, or a family of pigs, are useful things on every country place, be it a farm proper or country seat, with only its garden and fruit yard, let every one who requires a creature of the kind, see that he select good ones of an *improved* race, easy kept, and quite tempered; and if he want their services in his fruit orchard, they will not then root out his trees, or rasp off their bark, as the common ill bred brutes of the country are sure to do if they get access to them, thus effectually destroying curculio, fruit, and tree; whereas, your quiet little "Tussers" will graze among the trees, nosing over the fruit, and "using up" the grub.

After reading this paper, I beg your readers not to suppose that I have these, or any other pigs to sell, as I have not. I write this solely *pro bono publico*, and to do justice to the good taste of my friend, Mr. JACKSON, as well as to advise all my horticultural friends to get good pigs when they get any. Your Suffolk pig, and your Essex pig are also quiet, gentle creatures, and well deserve all the patronage bestowed upon them; but in all my pig knowledge, I have never met with the beauty and perfection of the Middlesex pigs imported and bred by Mr. JACKSON.

LEWIS F. ALLEN.

Black Rock, July, 1852.

Domestic Notices.

CHURCH IN THE LOMBARD STYLE.—[See **FRONTISPIECE.**]—The great change, and no less striking improvement, which have taken place in the church architecture of our principal cities, within ten years past, are beginning to exert an influence on the rural and suburban edifices of the same character. The uncouth wooden buildings with frightful steeples, which deformed so many of our country towns, are gradually being displaced by tasteful and convenient churches of stone or brick, built in more correct proportions, and the interiors of which are really calculated to raise devotional feelings in the minds of the congregations.

The suburban churches of our country towns are very important features, not only as places of worship, but as bestowing dignity and beauty upon the towns themselves. To awaken and diffuse a taste for good country churches comes fairly within the field of our labors, and in addition to examples already given, we place before our readers this month, a handsome design by Messrs. WYATT & BRANDON, eminent architects in London, for a church in the Lombardic style of Architecture. It has been admirably carried out at Bethnal Green; the material, brick, with stone dressings. The interior dimensions are 117 feet long, 60 feet wide, and 60 feet high to the picket of the gable.

NEW HARDY CHERRIES.—We received on the 28th of June, from B. B. KIRTLAND, Esq., of Greenbush, N. Y., samples of two varieties of seedling cherries—called *Mary* and *Christiana*, that seem to us worthy of the attention of pomologists, especially at the north and west. These cherries appear, in fruit, flavor and foliage, to be a cross between the Mayduke and the Heart cherries, assimilating much more closely in flavor and color and form to the Mayduke than the other parent; the color bright lively red—the flavor sprightly sub-acid—the fruit borne in large clusters—the leaves rather narrow.

The "*Christiana*," with quite narrow, small leaves, and long stalks, is the finest flavored variety. "*Mary*" is the most profuse bearer and remarkably hardy. Greenbush is in a cold

portion of the northern states—the thermometer having fallen to 14° below zero the past winter. The consequence of this was that the cherry crop was almost wholly cut off by the destruction of the germs of the flower buds in winter, while these two seedlings of Mr. Kirtland's were loaded with the heaviest crops. From this fact, and the close relation which these seedlings have to the May Duke, there is every reason to believe they may prove hardy enough to supply that place in the north and west, which the comparative failure of nearly all but the acid cherries has left vacant.

LARGE TREES IN THE STATE OF NEW YORK.—It is much to be regretted that no work has ever been published with well engraved portraits of the finest specimens of our noble American forest trees, many of which are annually disappearing, either by old age, or by the process of "clearing up" the country. It is saddening to the heart of a lover of trees to see in many parts of the country the finest single specimens sacrificed by the wanton axe of the woodman, who sees only so much "cord-wood" in what, to his descendants, would be valued "beyond rubies." Of course new-world forests must be cleared up, but it is difficult to understand what good reason the most practical common sense man can have for despoiling the neighborhood of his dwelling of stately single trees—that should be held sacred as the pride and glory of his home landscape. One cannot but feel that the sentiment of the nineteenth century in this respect is far behind that of the most remote antiquity—as the Jews were forbidden to cut down the favorite trees even of an enemy. (Deut. xx, 19.)

The Genesee Valley is that part of New-York where the lover of fine trees will find most to delight and satisfy him. On the Genesee Flats is a kind of meadow-park of a thousand or more acres, belonging to the WADSWORTH family, with the finest specimens of park-like oaks, elms, and other trees of indigenous growth—finely developed and presenting studies for the artist or arboriculturist, such as are nowhere else

to be seen in the middle or eastern states. Mr. S. B. BUCKLEY has given, in Silliman's Journal, a record of some large trees, from which we extract the following paragraphs as worthy of preservation in the Horticulturist. (We should be glad to have accounts from our correspondents in various portions of the union, of trees of remarkable size—especially those which grow singly—and not in forests.)

"There is a 'big tree,' still alive, (July, 1851,) on the banks of the Genesee river, about a mile from the village of Genesee. It is a swamp white oak (*Quercus bicolor*.) At the height of about 20 feet, its body sends forth numerous large branches, many of which are now dead. The trunk varies little in size from the ground to the branches, it having an average circumference of 27 feet. The smallest circumference is 24 feet. An elm tree three feet in circumference is partly joined with it, their bodies often touching, and their limbs intertwining, the green leaves of the elm, make the old oak look fresher than it really is. They are situated in a pasture, and the ground is bare and hard beneath them from the trampling of cattle and visitors.

The swamp white oaks are numerous and often attain great size on the Genesee Flats. As examples, one is 14 feet in circumference; another 18 feet 9 inches; a third 12 feet 8 inches. The wood of this species is said to be superior to that of the common white oak. Many of these majestic trees contain more solid feet of timber than the "big tree," on account of their greater height.

A large tree on the Genesee River, near Genesee, attracted the notice of the early settlers of Western New-York. One of their finest roads, leading from Canandaigua to Genesee, via. the foot of Honeyoye Lake, was long known as the "Big Tree Road." The native Indians had long known this corpulent giant of their woods, and named one of their chiefs "Big Tree" or Great Tree." A section of this tree was conveyed to New-York, via. the canal and Hudson River, about 15 years ago, where it was used as a grocery.

I have recently, (Feb. 1852,) visited the lumber region in Alleghany county, N. Y., where a large portion of the hills and valleys are still covered with dense forests, through which the

white pines, (*Pinus strobus*.) are conspicuous for their great size and height. I measured one which was 15½ feet in circumference at the height of 4 feet. One stump was 5 feet in diameter, another 4½ feet. A saw log 4 feet in diameter, showed by its annular rings, an age of about 210 years. The largest log which I could learn of ever having been at any of the mills, was one sawed several years since, 7 feet in diameter. A plank from this log, containing 600 feet board measure, was exhibited at the county fair, at Angelica. I saw a hemlock, (*Abies canadensis*.) which was 12 feet in circumference.

In the history of New-Hampshire, by BURNAP, a white pine is mentioned which was 7 feet in diameter. MICHAUX, in his Sylva, states that he saw a stump in Maine more than 6 feet in diameter. He also measured two trunks that were felled, one was 154 feet long, and 54 inches in diameter, the other 142 feet long, and 44 inches in diameter. I quote the above to show that no part of the United States can probably boast of larger white pines than Alleghany county, N. Y.

An elm, (*Ulmus americana*.) was cut down during the present winter, on the farm of S. K. JONES, near Dresden, Yates county, New-York, whose stump is 4 feet 10 inches in diameter at 4 feet from the ground. At the height of 15 feet, the trunk was 15½ feet in circumference. At the height of 20 feet, where the trunk was divided into two large branches, the circumference is still greater. Its height was about 60 feet. Its annular rings indicate an age of about 800 years. [We think there are still larger elms in the valley of the Connecticut. Will some of our readers there send us statistics? Ed.]

In the township of Sodus, Wayne county, N. Y., are many large Sycamores, (*Platanus occidentalis*.) several of which are from 14 to 16 feet in diameter. The largest of them are uniformly hollow. These trees are not far from Lake Ontario, and their branches still appear to be in a flourishing condition. Most of the trees named in the foregoing article grew in a rich, deep alluvial soil; even the large pines were either in ravines or valleys.

valuable scientific account of the climate of San Francisco by Dr. GIBBONS, we extract the following, as giving more precise information than any usually obtained, and as calculated to explain the reason why the new evergreens from California are not so hardy in the middle states as those from China and the Himmalayas:

"The most striking peculiarity in the climate of San Francisco, is its uniform temperature. There are no extremes of heat or cold. There was only one day in the three summer months (the 18th of August, 1851) when the thermometer rose to 79°; (at Philadelphia it reaches this point 60 to 80 days in the year.) Only once in the year did the thermometer sink to the freezing point, and it was below 40° only on twenty mornings.

In the summer months there is scarcely any change of temperature in the night. It is in early morning, sometimes clear, sometimes cloudy, and always calm. A few hours after sunrise, the clouds break away, and the sun shines full cheerfully and brightly. Towards noon, or most frequently about one o'clock, the sea breeze sets in and the weather is completely changed. From 60° to 65° the mercury drops forthwith to near 50°, long before sunset, and remains almost motionless till next morning. The sudden fluctuations of temperature incident to the climate of the Atlantic states, are unknown here. We have none of those angry outbreaks from the northwest, which change summer to winter in a few hours.

As regards the influence of the seasons on vegetation, the common order is reversed. The entire absence of rain in the summer months parches the soil and reduces it to the barrenness of a northern winter. The cold sea winds of the afternoons of the summer solstice, defy the vertical sun and call for flannels and overcoats. When the winds cease, as they do in September and October, comes a delightful Indian summer. In November or December the early rains fall, and the temperature being moderate, vegetation starts forth, and mid winter finds the earth clad in lively green and spangled with countless flowers. The spring opens with genial warmth, but just as the April sun begins to give promise of summer heat, its rays are shorn of their power by the winds and mists of the Pacific.

These remarks apply to only a small part of the state of California. Beyond the influence of the bay of San Francisco and its outlet, the sea winds are scarcely perceptible even near the ocean."

STRAWBERRY BEDS.—Sir: I followed your directions last year in making strawberry beds, and with such extraordinary success, that I am induced to recur to the subject for the benefit of those who like myself would "take pains to excel as good cultivators" if they knew how. I began by collecting a dozen loads of good stable manure, rejecting all the litter. I then marked out the ground to be devoted to strawberries, and commencing on one side opened a trench three feet wide, by wheeling all the top soil, for six inches deep, to the opposite side of the intended strawberry plat.

I then spread a coat of the stable manure 4 inches thick, over the lower layer of soil, laid bare in the trench, and turned it under, mixing it well with this soil. Then I threw the top soil of the next space of three feet upon the bottom soil in the trench already manured. This left a new space or trench 8 feet wide, which was manured and trenched like the other, and this was repeated till the whole plat was worked over. I then dug over and levelled the top soil again, mixing some decomposed manure with the surface of the beds on making them. Through these beds I set two rows of plants, the rows 14 inches apart—the plants 10 inches apart in the rows. I removed the plants early in August—young runners with little balls of earth attached. I directly covered the beds with tan-bark, 2 inches deep. This kept the plants cool and moist, so that they struck root immediately, and made such extraordinarily fine plants, that I have had a fine crop this season, many of the berries measuring 3 to 4 inches. I planted 8 sorts, and after trial prefer the following. Burr's New Pine, Hovey's Seedling, Swainstone Seedling, Early Scarlet. Yours, A PHILADELPHIA SUBSCRIBER. July 14, '52.

SOAP SUDS AND POULTRY MANURE FOR GRAPES.—A "Horticulturist on a very small scale, having only 4 pear trees and six grapevines," (dating at Pittsburgh,) writes us an account of his mode of feeding a large Catawba grapevine, which may interest some of our suburban readers. He forms a large basin around

the roots of his grapevine, early in the spring, by raising a curb or box of boards, so that the soil over the roots will take a couple of barrels of water without allowing it to run to waste. He provides himself with a quantity of the sweepings or manure of the poultry yard, keeping it constantly diluted or dissolved in a barrel, at the rate of a peck to a barrel of water. Every week, at the close of the "washing day," he first empties upon the roots of the vine a pailful of the manure water from the barrel, and afterwards as much of the "suds" as the vine will take up. The consequence, as may be expected, is a great luxuriance of vine, and enormous clusters of fruit. A very large back-building is covered by this vine, and the fruit is just twice as large, in bunch and berry, as those on the other vine, left to ordinary good garden soil. A neighbor, who had an old Isabella vine that had failed for several years to bear any good fruit, has taken the hint, and applied the "weekly wash," with the fertilizer as aforesaid, and has been gratified with a larger and more promising crop this year, than the vine ever bore previously.

A WELL DESERVED TRIBUTE.—The New-York State Agricultural Society has, by its steady devotion to the interest of the farmer, by the solid sense and intelligence of its officers, by its liberal premiums and its great annual fairs, become one of the most useful, honorable, and influential institutions of the country.

Its premiums now amount to over six thousand dollars per annum, and its *Transactions*, published every winter, contain a great amount of valuable experience and observation. Few of those even who share in the reputation and are benefitted by the results of such a society, know how much of the labor is done by a few earnest, devoted men, who, though not the conspicuous dials of the time keeper, are the concealed balance wheels or regulations so much more necessary to the accuracy and perfection of the machine. The Treasurer and former Secretary of the Society, Mr. TUCKER, pre-eminently belongs to this class, and we notice with no ordinary pleasure that by the following resolutions of the society, passed some time since, the executive board have determined to present him with a handsome service of plate, as an acknowledgement of their estimation of his worth.

WHEREAS it is the opinion of this board, that the New-York State Agricultural Society is greatly indebted to Mr. LUTHER TUCKER for his able, efficient and long continued labors, as a member of the Executive Committee, having acted as its secretary and business officer for the first three years after its reorganization, in 1841, and aided most efficiently in perfecting its organization, and in carrying into successful operation its first Fairs, at Syracuse, Albany and Rochester, furnishing an office for the Executive Committee, the necessary stationery, &c. for the three years; preparing for the Press, and superintending the printing and distribution of its Transactions, and in performing all the duties devolving upon its local Secretary, for all of which, as well as the expense incurred by him in the performance of these services, he declined to receive any reward: and,

Whereas Mr. TUCKER has, with the exception of the year 1844, when he declined to act as Secretary, on the ground that the Society was then quite able to pay for such services, and the year 1847, when he again declined the secretaryship, to which he had been elected, served the Society, as a member of this Board, or as its Secretary or Treasurer, from its reorganization to the present time, without remuneration, except for the year 1845, when he was allowed \$300, an amount less by \$250 than was paid for the same services the previous year: therefore,

Resolved, as the unanimous opinion of this Board, that to no man more than to Mr. TUCKER is the Society indebted for its present highly prosperous condition, and that the thanks of the Executive Committee, together with a service of plate to the value of \$500, be presented to him, as a testimonial of their high appreciation of his services and character.

THE COLD WINTER IN ARKANSAS.—A. J. DOWNING, Esq.—Dear Sir: As you expressed in the Horticulturist a wish to hear from different parts of the country, respecting the effect of the last extraordinary winter on trees and plants, I will endeavor to tell you how things stand in this neighborhood, although it is doleful enough. The latter part of the summer of 1851, as well as the autumn and forepart of winter, was unusually dry, and the trees making no late growth, the wood was perfectly matured. The first cold weather was on the 15th of December, the thermometer standing at 4. On the 18th it was at zero. January 18th, 2 below zero; 19th, 28 below zero; 22d, 16 below zero, all at sunrise, when the thermometer was at its lowest. 28th, at noon, it was 70, and Blue birds singing; 30th, at sunrise, 60. Here was a difference of temperature of 96 degrees, in the short space of nine days; no wonder it proved so dis-

astrous. Through the month of February, and the first half of March, the weather was very pleasant, so that vegetation was far advanced, and the pear tree nearly in bloom, but on the 18th the thermometer fell to 16, and since then it has continued cold and disagreeable, until the last days in April.

In summing up the injury that has been done, I allude to my own garden and neighborhood, generally, for there are few places where the situation is a favorable one, that they have not suffered quite so much. My peach trees are nearly all killed; and part of the one year old pear trees in the nursery, with some of those two and three year old, that were planted out. *Magnolia grandiflora*,* *M. purpurea*, and *M. tripetala*, are frozen to the ground. *Magnolia macrophylla* is injured only on a few shoots of last years growth. My beautiful *Pyrus Japonica* hedge had not one early flower, and some of its twigs are frozen. Chinese Honeysuckle, *Deutzia scabra*, and the hardy roses, with one single exception, are killed to the ground. The Chinese Arborvitae is entirely destroyed.

The Trumpet Honeysuckle, the White Italian Honeysuckle, the Purple, White, and Persian Lilac, the Snowball, the Fringe Tree, and Venitian Sumac, are the only things that escaped.

Of Apples; I think we shall have a tolerable good crop, only a few of those that were most advanced were injured by the late frosts. Pears we shall have but few; and Plums none at all; the Curculio destroys them all, and so I cut down the trees.

A few words about the Osage Orange. In the fourth vol., page 146, of the Horticulturist, your correspondent, J., says the seed all rotted in the ground, and then asks, "Was the seed worthless, or was it immersed too long, or was the water too hot?" On the 5th of April, 1848, I planted a quart of Osage Orange seed that had been soaked for 40 hours in warm water, and afterwards spread on a board for 82 hours. When I received the seed the ground was not prepared, and by the time I was ready to plant, it rained, and continued to rain for several days; at last, in a fit of desperation, I made drills in

* *Magnolia grandiflora* has stood the winter perfectly at Washington. *M. tripetala* is perfectly uninjured, and now in full bloom in our grounds on the Hudson. Ed.]

the mud with my fingers, (it was impossible to use the drilling machine;) threw in the seed, and covered it slightly. Never was seed put in in worse condition, nor did any ever grow better; indeed, I thought every seed came up. The water poured over the seeds was not quite so hot as that used by your correspondent. I imagine the seed was worthless when he got it.

In conclusion, let me tell you, Mr. Editor, that I have received much of benefit and pleasure from the perusal of your volumes. Should you find anything in this, my first attempt, likely to interest your readers, you are at liberty to use it. I am sir, respectfully yours, J. M. J. SMITH. Fayetteville. Arkansas, May 4, 1852.

COLD THAT DESTROYS PEACH BUDS.—I have of late been perusing the horticulturist, which to me is very interesting. Among other things that particularly attracted my attention, was a notice of fruit buds being destroyed by the extreme cold weather of the past winter. It has frequently been asserted that 12 degrees below zero destroys peaches and some other fine fruit. As I have had some experience in fruit raising for twenty years past, I have had an opportunity of making some observations to my own satisfaction, and as you have requested notice from different parts of the country, respecting the prospect of fruit, I send you some facts from this section. Although I have to refer to other persons to determine the state of the weather, still I have reason to believe the statements correct. The thermometer records a number of days the past winter, ranging from 14 to 26 degrees below zero. Now does that degree of cold kill the fruit? Nature answers the question. The spring with us is quite backward, but it gives us full evidence that there shall be no failure in the promise of regular seed time and harvest. Though the elements may yet prove destructive, the prospect is promising. Peaches, plums, and cherries, are now coming out, clothed with their pink and white, even to the covering of their branches. Does this look like their being frozen to death—other proofs we have, last year 1850 and 51, the cold ranged from 18 to 27 below zero and there has not been so large a crop of peaches for eight years; plums were mostly destroyed by the curculio, cherries quite plenty. I have some 125

peach trees, set last season, one year from the bud, quite a share of them are now filled with blossoms; and plums, from six to eight feet high, are clothed in bloom. I have some dwarf pears standing from two and a half to three feet high, set for a dozen fruit each—so much for our prospects in this cold region.

I raise all my fruit trees, perhaps I may at some leisure moment send you my manner of cultivation. CHARLES SMITH. *Shelburne, Franklin co., Mass., May 24, 1852.*

[The irregular effects of the winter are very difficult to understand. It has been supposed that 12° below zero invariably killed the blossom buds—but there are many examples the past winter of their surviving a greater cold uninjured—while in some portions of the country they were quite destroyed with less cold. Probably more depends on the *thawing* after the severe frost than on the cold itself. Ed.]

COUNTRY SEATS ABOUT BOSTON.—SIR: My attention has been called to an article in the April number of your Journal, signed "Horticola," and to a commentary on the same in the May No., by a "Subscriber," between whom there seems to be some little difference of opinion about the relative beauties of various country seats in this town, (Waltham, Mass.)

This is a nice question, as all mere matters of taste are; but can be settled, perhaps, by a little reflection. The truth is, we are, here, a little fastidious in these matters. The beauties of country residences arise from position as well as surrounding scenery; and we are so completely encircled with positions so beautiful by nature, and requiring so little artificial adornment, that we are not aware how capricious we have become in our taste, and judgment too, in those matters. In the early settlement of this state, when our ancestors, with the whole land before them, were looking only for pleasant places on which to take up their rest, tradition says that when they reached Watertown, of which Waltham was then a part, they ceased their search, satisfied that their new world could not reveal to them, beyond, a fairer inheritance. Standing on these hills, from which they could see, on the one side, the sun rising from the dreary ocean which they had passed in fear, and setting on the other side, in, to their minds, the still drearier wilderness, they planted themselves

"with much joy," in this lovely region. I say, then, we are not judges of fine positions; we have no waste places for contrast; we see nothing but nature, and so arrayed as to appear, "even when unadorned adorned the most." But to go back to the true question before us—

"HORTICOLA," a stranger, I hear, but enamored of our town, (a proof of his good taste,) speaks rather slightly of the ancient seat of the LYMAN's in this place; the oldest I believe, and heretofore considered the grandest; and passes by its old rival, the Gore Place, with mere mention; this *does not* suit "A SUBSCRIBER," nor would it any old conservative. The lands of Mr. LYMAN are broad and rich, but low. It is a valley residence, and of course does not appear to the same advantage an estate chosen more for prospect would; such was not the fancy of that day. Gore House, of about the same period, is in similar taste. In that day, houses were built for merely comfortable residences—now for show country seats, and prospects are now much more valued. HORTICOLA speaks flatteringly of Rose Hill, where the appliances of a more modern taste are fast revealing the beauties of a position entirely differently situated. This accounts for HORTICOLA's opinion, and "A SUBSCRIBER's" too: they are both right. But my intention in this note is to speak a word for a part of our town, which has till this present time, been obliged to be content with but silent praise. Would "SUBSCRIBER," if he be, as his deep interest and feeling in the case, strongly encourages one to think—an inhabitant of this lovely land, but turn his eye upon "Trapilo," our romantic hills and fertile vales in the north and east; could he abstract himself from the dusty "plain," and repose himself awhile among those quiet scenes, and select some favored spot for experiment, my conviction is, that with sufficient means, he could distance all competitors in a beautiful country seat. But I find my communication is becoming too long, and I must omit much I intended to say about some other places in this town; but I hope "HORTICOLA" will communicate again with you, for he evidently has an eye to beauty in landscape gardening. TRAPILO. *Waltham, Mass., May 31, 1852.*

SULPHATE OF AMMONIA.—I was very much pleased with the recommendation of Sulphate

of *Ammonia* as a fertilizer, by "An Amateur," in your *Magazine* for June." The one pregnant assurance, "nothing so good can be cheaper, and the substance may be obtained at almost any apothecary's," wrought in me a lively satisfaction—endorsed as it was, by your own professional endorsement. Filled with faith, I straightway sought a drug store, in search of the requisite "Sulphate of Ammonia," and experienced something very like contempt for the establishment, on learning that no such substance contributed to make up its assortment. But after having visited four other large stores with like success, and finding the said "sulphate" at neither, while its very existence seemed doubted at many, I sobered down into a more accustomed sobriety, and contented myself with a small dose of the *Muriate* for experiment.

Now, what is the trouble? If no *Sulphate of Ammonia* can be found at the respectably extensive drug stores of Syracuse, am I not warranted in doubting the general ability of horticulturists to easily procure it? Or does "An Amateur" expect us to manufacture for ourselves, as we can do if necessary, from salts which apothecary's do keep? or is it something else than the *sulphate* which he uses? For one, I am really anxious for the means of preparing so valuable a fertilizer. J. M. W. Syracuse, June 6, 1852.

[Our correspondent's only error was in saying the *sulphate* was easily procured. We believe it is only to be had of the wholesale druggists in the larger cities. *Muriate* of ammonia, (sal ammoniac,) may be had at any druggists, and from some experiments we have made lately, we believe it is a very tolerable substitute for the sulphate, used in the same proportions. Ed.]

INSECTS ON APPLE TREES.—A. J. DOWNING. On my property near this city, I have a small young orchard of apple and peach trees, which early in the spring, gave promise of a fine crop of fruit. The trees are very thrifty, and are just beginning to bear. The apple trees, especially, look well, and every one had some fruit, and some of them were loaded. But an insect of the bug or beetle species has attacked my orchard, and I fear they will totally destroy the fruit, and seriously injure my trees.

About a week since was the first I observed of

them. I then discovered a few of them on different trees, eating the tender leaves and young apples. In the past week they have multiplied by thousands, and have commenced on my peach trees, and even the vegetables in the garden. They have eaten up many of the leaves entirely, except the stem, and nearly all the apples. They commence by making a small incision in one side of the apple or peach, then eat the pulp, and increase in numbers as the opening enlarges, until the fruit is entirely devoured. I have seen as many as 15 and 20 all crowding their heads into this opening, in the side of a small apple. The peaches suffer in the same way, but they like the apples much better.

When I discovered these insects, my first step was to consult my "books," see what they were, and what was the best method of destroying them. I have the works of DOWNING, BARRY and THOMAS, all recent publications, and specially devoted to fruit trees, besides several other works that treat partly on the same subject, but in none of them could I find a description which would answer, as I thought, to this insect. I am a mere novice in the delightful study and art of fruit-growing, as yet, and could not tell any of the destructive insects except by comparing them with the descriptions in the books—which, by the way, I find entirely too brief and unsatisfactory for a learner like myself. (Query—What is the best work on this subject of "Insects") [Harris' Treatise—now out of print—but a new edition of which is in preparation. Ed.]

This insect appears to resemble the *locust* more in its habits and ravages, than any other insect of which the books treat. But it is not near so large as the locust, and carries on its work of destruction in perfect silence. They fly about but little, and chiefly in the warmest part of the day. They continue pretty much in the same place, on the leaf or apple, during day and night. In the evenings and mornings they are more stiff and torpid. This induced me to try an experiment of catching them in a sheet early in the morning, when the dew is on the trees, and then killing them. We tried this plan, but after slaying our ten thousands, we gave it up as a hopeless job. I then tried syringing the trees most effectually with strong tobacco juice—but this seemed to have but lit-

tle, if any effect, upon them. This would never kill them, for I found they would live after being immersed five minutes in the juices. Even very strong brandy would not kill them for several minutes.

I herewith send you some eight or ten of these insects, a part of what I took from one apple, that you may see them, and give me any further information you may possess as to their nature, habits, &c., and the best mode of destroying them. If they are unknown to you, perhaps a brief notice in the "Horticulturist" would elicit the desired information, or attract direct attention to the insect, if it should be found in other sections of the country. I believe it prevails to a greater or less extent in all the orchards in my neighborhood—how much further I have not learned. It is my intention to watch the insect closely, and learn more of its nature and habits.

The insects I send you were killed by being immersed in strong brandy. I will put them up in cotton, so that they may carry safely in my letter.

My ground is on the bank of the Ohio river, commonly called "bottom land,"—and is a deep, rich, sandy loam; but the trees on the river hill were also attacked.

Any information on this subject you can give me in a private letter, or in the Horticulturist, will be thankfully received. Yours, &c. J. N. F. W. *Pittsburgh, Pa., June 19.*

The insect sent us with the above is the rose-bug or rose-chaffer, well known in some parts of the middle states, where the soil is light and sandy. It is the most difficult insect to destroy where it appears in abundance. In some vineyards on the lower part of the Hudson, infected with it, the only successful remedy yet found is to pick them by hand, and put them in boiling water—an obviously hopeless task, when so abundant on trees as described by our correspondent. If any of our readers have found a more easy and speedy death for them, we shall be glad to hear from them. ED.

ROSES—BIRDS AND INSECTS.—I am very much obliged to you for the information you gave me last autumn, as to the winter disposition of my roses; it kept them as nicely as possible, and this summer they have made me quite famous, and people sometimes come from quite a distance to

see them. But what *shall* I do to my Chromatella? It grows and branches out until it looks like—a centipede; it isn't a pretty comparison I know, and if my rose would behave itself properly, I should not think of it, much less speak of it. In the first place it is sixteen feet high, and every two or three inches along the whole length, there is a branch from two to three feet long; and it *will* not blossom—and when it does blossom it is not what it should be. Two years ago it was yellow—a true Chromatella, as I suppose; last year it would not spend time to blossom; this spring it had eight blossoms, but they were white, with pink edges and just a faint shade of yellow in the centre. Is there no way to bring them back to their original color? Is this change in consequence of being near other roses? The great thing has nearly killed my poor little white moss rose, by fairly starving it out.

I do not like your correspondent J. C. H. (I have just read his article on "birds, insects, and other matters" in the July number.) I am very angry with him. I think that if I had an opportunity I should feel strangely tempted to pull his hair! Probably if he knew it, his answer would be something like that of NAPOLEON's ambassador to the old lady: "Madam, the Emperor would be very sorry to learn that you have so poor an opinion of him." Or something like it. But I am angry nevertheless. "Boys do not shoot birds," do they? Then I am laboring under a delusion in thinking that my own pet robins, and blue-birds too, became food for—fishes, once upon a time! There are a few boys in these United States, who do not live in the city, and who are not such very poor marksmen either, as I know to my cost. But I find that writing about it is by no means a soothing process, so I will stop, lest I say something to be sorry for, or ashamed of.

But do tell me what to do for my rose, Mr. Downing, for I very much fear it is a hopeless case. Very respectfully yours, A SUBSCRIBER AT THE WEST. *July 15, 1862.*

Our "Subscriber at the West" must not lose her patience with her Chromatella rose, and she will have abundant reason to be satisfied with it next season. At present—as is always the case with this rose, when it has fair play, it is vindicating its nature as a climber,

and expending all its energies in growing. Let it grow, and the larger it gets the more superb will be its bloom, when it comes into a flowering condition again—which it will doubtless do next season. We seen it, farther south, covering a trellis 50 feet long, loaded with flowers at the end of every branch. There, it stands the winter without care, but in Illinois our correspondent will have to bend it down and cover it so as to protect it from frost and wet in winter. All that need be done with it this season; is to let it grow till the middle of October as freely as it likes. Then commence *pinching* off the end of every shoot, and repeat this if it starts again. This will force the young wood to ripen well before winter, and next season the plant will doubtless bloom very profusely.

We quite agree with our "Subscriber at the West" in differing from J. C. H. in his opinion regarding the worthlessness of birds as insect destroyers. If J. C. H. will examine the works of any of the entomologists who have taken pains carefully to study the habits of insects, he will find them continually referring to the agency of birds in destroying or preventing the excessive increase of various sorts of insects. We ask, as a specimen, his attention to the following paragraph, which we quote from Harris' *Insects*, p. 28. "A cautious observer, having found a nest of five young jays, remarked, that each of these birds while yet very young, consumed at least fifteen of these full sized grubs (cockchafer) in a day, and of course would require many more of a smaller size. Say that, on an average of sizes they consumed twenty a piece, these for the five, make one hundred. Each of the parents consume say fifty, so that the pair and family consume two hundred every day.

But as the grub continues in that state four seasons, this single pair, with their family alone, without recognizing their descendants after the first year, would destroy 80,000 grubs. Let us suppose that the half, namely, 40,000 are females, and it is well known that they lay about 200 eggs each; it will appear, that no less than *eight millions* have been destroyed, or prevented from being hatched by the labors of a single family of jays. It is by reasoning in this way, that we learn to know of what importance it is to attend to the economy of nature, and to

be cautious how we derange it by our short-sighted and futile operations." Ed.

NOTES FROM ILLINOIS.—Sir: It is rather late in the season to inform you of the effects of the last winter, but as I do not observe any mention made of it by correspondents from Illinois, I will give you a few items—although September was a very hot and dry month, yet the winter came on so gradually that fruit trees and fruit would not have suffered but for the great severity of the freezing—the mercury in F. at several times went to 14° below zero, but especially on the 19th January when it reached 22° below zero. Of course we could not hope that the buds of the peach could resist such extremes, but we hoped that the seasonable weather in the beginning of winter had prepared the tender shoots to resist it—but it proved too much for them, and great numbers of young trees have wholly perished, while all have suffered greatly—from one inch to three feet of the extremities of the limbs having been killed. Strawberry plants that were not protected also suffered—particularly Hovey's Seedling—a strawberry that I received as Keen's Seedling, but which I think must be the Early Scarlet, has stood the winter well, and is the only one that has set any fruit—but much of that was killed by a frost on the 20th May. Rather a hard climate this for gardening and fruit culture—ten days ago to-day every tender plant that was not well protected, was destroyed or injured by frost—the mercury being down to 82° on the morning of the 20th, and to-day the direct rays of the sun have scorched and curled beans and the tender foliage of the pea—at three P. M., the mercury stood at 96 in the shade, free from reflection. But all I wish to trouble you, after this long story about the difficulties of our climate, is to ask you or your correspondents for some remedy against an enemy to the strawberry, which is new to us here. It is a worm about an inch long when grown, dark colored with but few bristles, very active in its movements when disturbed, that rolls itself in the leaf by a web and then preys upon everything within reach giving a scorched and blighted appearance to a whole bed that previously was most luxuriant—it is so wound up in the leaf that no general application of dry liquid will reach it—tobacco juice will destroy it when im-

mersed in a pretty strong preparation of it—but it must first be taken from its secure hiding place in the leaf, but this process would be too much like the Frenchman's flea powder for practical application—it commenced its depredations about the time the bloom began to come out and continues yet.

I think it is the same worm that attaches itself singly to the foliage of fruit trees, and is so destructive to it. Some of your correspondents anticipated a very general destruction of insects from the severity of the past winter. It is commendable to see good in every occurrence, however unfavorable in appearance, but I fear that the stock of destructive insects has not been materially diminished here, for they seem unusually ravenous for every tender sprout, after their long torpid slate.

The Osage orange in this region, stood the excessive cold most satisfactorily—even seedlings being but slightly injured. It is fast growing in favor here, and will be the fence of this country in a few years, unless some unlooked for defect appears. There will be a few hedges turned out next spring, five years from the seed. Respectfully yours, &c. J. B. M. *Warsaw, Ill., May 29, 1852.*

SOUTHERN FRUIT CULTURE.—Dear Sir: As we do not profess infallibility, will you allow me to qualify what I stated in the last Horticulturist in regard to the American Summer Pearmain. This apple I have noticed two or three years on young trees, and it has usually cracked a good deal, so much so, that its quality and bearing properties did not seem to me to warrant its culture with this objection.

This year, however, it ripened in the gardens of two of my friends so finely, that they called my attention to it particularly. With Dr. CAMAK the tree has borne this year an abundant crop of large fair fruit of the best quality. It ripened about the first of this month. Dr. WOOD has it also under the name of "Watkin's Early," and equally fine. Whether the fine season, or maturity of the trees, has made the specimens that come to my notice so much better, this much is certain, that should its good qualities continue permanently, no better summer fruit could be desired. A friend from a neighboring county, states also that with him it is an excellent fruit and a good bearer.

The Gravenstein is now just ripening an abundant crop and though rather acid here is still a good fruit and worthy of cultivation.

Our experience in regard to peach trees, in the the main, coincides with that of Mr. SCOTT. In ordinary years they bear abundantly but there is no doubt that they are more liable to *spring frosts*. This year for instance, I venture to say that I will get as much fruit from a dozen seedlings in my garden, as will be gathered from any hundred northern peach trees in this town. But they generally *bear well*. Mr. HARWELL (he will pardon me for using his name,) writes me in a letter of last month, that his northern peaches are getting acclimated at last, and doing well. From the early Tillotson he gathered. June 5th, a single half bushel, which he sold in Mobile for \$10.50.

Our Ohio friends cannot believe the tales from this quarter of the Union, about ever-bearing strawberries. But there is very little doubt that in this climate, if well watered, the strawberry will bear nearly all the season. Since the 2d of April there has not been a week that my vines have not shown ripe fruit; not much, it is true, for they have had no care, but most after wet weather, and there is not the shadow of doubt, from the testimony of reliable eye witnesses, that Mr. PEABODY's statements are entirely correct. With me Burr's New Pine and Large Early Scarlet are the only ever-bearing varieties, Hovey's Seedling is not. Yours very respectfully, WM. N. WHITE. *Athens, Geo. July 9, 1852.*

REPLY TO DR. VALK'S STRICTURES.—Dear Sir: As the permanent improvement of the native grapes by hybridization with the exotics, is a matter of much national importance, you will perhaps, excuse me for requesting again a corner in your valuable Journal, in answer to the caustic remarks of Dr. VALK.

As I am apt, upon honest conviction, to speak somewhat abruptly, I committed the same error by saying, "he has gone the wrong way to work." That some polite effusion of language might have been used to express the same meaning, without giving offence, I admit, and hope he will excuse the expression; but it is not by indulging in invective and braggadocio, nor yet by applying sarcastic pique against

a trifling misplaced etiquette, that science and observation are to be put down.

As the matter at present stands, in this instance, your correspondent has proved little more in his favor than positive assertion founded upon presumptive evidence,—and his assumed position is a wrong inference, for he is surely aware that the desideratum is not so much the hardness, as to standing the severe frosts of winter, but a constitutional power to resist mildew during the growing season: and though the former is a very desirable point, yet it is a trifling matter compared with the latter. We know that in many situations far north of this neighborhood, the foreign grapevine will stand unprotected without injury; and if they did not do so, we might cover them with earth, as is done with the Fig and the vine in the vineyards in the steppes of Russia. I sincerely hope that he has gained all that he asserts, but under the circumstances it yet remains to be proved, whether or no he has got a *true cross*, for it may yet turn out to be nothing more than an inferior variety direct from the Hamburg, as I know that seedlings from that variety often answer the description of your correspondent; and those “who know” will look with skepticism, at least, upon the experiment, until it has been grown in different localities, and under various circumstances. And I repeat that he would have made surer work of it, as regards constitution, and most likely fruit, also, if the Isabella had been crossed with the Hamburg. Although “practical experience” may sometimes prove my argument to be incorrect, Dr. VALK has not yet shown it to be so—and if he will give it a fair and unprejudiced further investigation, and as fairly submit his experience thereon to public decision, I will willingly abide by the verdict. If, acting in accordance with the inscrutable and immutable laws of the all-wise designer of the universe, is, in his estimation, catering *a la Barnum*, he is welcome to the delusion. What I stated is founded upon the results of many experiments upon different tribes of plants; it is a demonstrated fact, and is supported by the authority of the most scientific investigators of nature.

I do not wish to be a disputant, nor to detract from the honor due to your correspondent, and I hope that he will receive these comments with

as good feeling as they are penned. My desire was to throw a mite into the treasury of useful knowledge, for the benefit of others, and if it should hereafter realize my wishes, I care not for his severe, but futile remarks. I am yours most respectfully. WM. CHORLTON. *New-Brighton, Staten-Island, July 15, 1852.*

PRUNING IN AUTUMN.—The late S. W. Cole, who strongly recommended autumnal pruning for fruit trees, says, “Thirty-two years ago, in September, we cut a very large branch from an apple tree, on account of an injury by a gale. The tree was old, and it has never healed over, but it is now sound, and almost as hard as horn, and the tree perfectly hard around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put in the cavity.”—*Alb. Cultivator.*

DWARF APPLES.—The Genesee Farmer states, that a dwarf apple tree, seven years planted, and ten years old, the tree not over three feet high, growing on the grounds of Aaron Erickson of Rochester, produced a Fall Pippin sixteen inches in circumference and weighing twenty-six ounces. Two or three others were nearly as large. Apples grow rather larger on dwarfs than on standards. There is one interesting question in connexion with this subject, that we would like to have answered, viz: At what price could such apples, thus grown on dwarfs, be afforded per bushel, as a general average for seasons and cultivation and the cost of a crop per acre,—and the comparative value with other apples in market.—*Albany Cultivator.*

Notices of Societies.

Albany and Rensselaer Hort. Society.

The first exhibition for 1852, took place at the N. Y. State Agricultural Society Rooms on the 29d June; the floral display, both in beauty and variety, eclipsed that of any former exhibition; and taking into consideration the unusual drouth, the display of fruits and vegetables exceeded all anticipations.

The Society met at 12 M. Dr. Herman Wendell, its President, in the chair, when the following gentlemen were chosen delegates to represent it in the American Pomological Congress, which is to convene in Philadelphia on the 13th of September next, viz: V. P. Dow, Herman Wendell, M. D., James Wilson, B. B. Kirtland, D. T. Vail, B. P. Johnson, Luther Tucker, and E. Dorr.

The following gentlemen to represent it at the Autumnal Exhibition of the Massachusetts Horticultural Society: viz—Joel Rathbone, S. E. Warren, C. P. Williams, Jefferson Mayell, Wm. Newcomb, Wm. A. Wharton, and Amos Briggs.

And the following to represent it at the Autumnal Exhibition of the Pennsylvania Horticultural Society, viz: E. P. Prentice, E. Corning, Jr., Wm. James, J. S. Gould, L. Menand, Dr. John Wilson, and W. A. McCulloch.

There was a very fine exhibition of Strawberries, Mr. Rathbone, of Kenwood, exhibiting seven, James Wilson four, B. B. Kirtland ten, C. P. Williams six, and J. S. Gould sixteen varieties. The premium for the finest flavored variety was awarded to Barr's New Pine.

Of Greenhouse plants, flowers, and bogness, there was a very fine exhibition.

On the vegetable table were well grown specimens of cauliflower, cucumbers, lettuce, peas, rhubarb, &c.

The second exhibition for 1892, took place at the Hall of the Agricultural Society, on Tuesday, the 6th July. The display of fruit, as will be seen by the report of the committee, was unexpectedly large and varied, as was also the show of plants and flowers, as well as vegetables.

The Society met at 12, M. Dr. Herman Wendell, its President, in the Chair. A communication was read from the New-York Horticultural Society, inviting co-operation with them in promoting Horticultural progress, which was ordered on file, and the following gentlemen chosen delegates to represent the Albany and Rensselaer Horticultural Society at the Annual Exhibition of said Society, which is to take place in September next, viz: Joel Rathbone, V. P. Douw, Herman Wendell, D. T. Vail, E. P. Prentice, B. B. Kirtland, S. E. Warren, B. P. Johnson, L. Tucker, James Wilson, E. Corning, Jr., Jefferson Mayell, L. Menand, E. Dorr, and C. P. Williams.

The show of Fruits was very fine, and premiums were awarded as follows:

Cherries.—For the best and most extensive collection, B. B. Kirtland, \$3. For the second best and second most extensive collection, Jefferson Mayell, \$2. For the best three varieties, to E. E. Platt, for Grignon or Yellow Spanish, Black Tartarian and Mayduke, \$1. For the best one variety, to B. B. Kirtland, for Elton, \$1.

Currants.—For the best and most extensive collection, to James Wilson, \$3. For the best and finest flavored variety, to Col Rathbone, for Knight's Sweet Red, \$2. For the second best, and second finest flavored variety, to Jefferson Mayell, for very fine specimens of White Dutch, \$1.

Gooseberries.—For the best and most extensive collection, to Joel Rathbone, Esq., \$3. For the second best and second most extensive collection, to V. P. Douw, \$2. As the gooseberries were unripe, the premiums for best flavored and best variety, could not be awarded.

Raspberries.—For the best and most extensive collection, to Col Rathbone, for five varieties, \$3. For the best and finest flavored variety, to Jefferson Mayell, for Franciscus, \$2. For the second best, and second finest flavored variety, to V. P. Douw, for Red Antwerp, \$1.

The display of greenhouse plants, flowers, &c., attracted much attention, and was considered fully equal to any previous exhibition.

Of vegetables there was a handsome exhibition, consisting of cucumbers, beets, onions, carrots, string beans, squashes, &c.,

Pennsylvania Horticultural Society.

The stated meeting of this association was held in the Chinese Saloon, Philadelphia, on Tuesday evening, July 20, 1892. Gen. Patterson, President, in the chair. The exhibition was unusually fine in each department. The displays of plants remarkably so, and consisted of five extensive collections all in full flower. The President's gardener contributed a very large table of finely grown specimens—Hydrangeas, Yucca, Gloxinias, Gardenias, fine varieties of Fuchsias, etc. James Dundas' gardener, beautiful specimens of *Stigmaphyllon ciliare*, *Stauhepa grandiflora*, one of the finest air plants, *Cutleya crispata*, *Torenia*, *Gloxinias*, *Fuchsias*, and *Hydrangeas*. Harry Jagersoll's gardener, a choice collection of *Gloxinias* and *Achimenes*, which reflected credit upon his skill. Caleb Cope's gardener, brought twenty-six select plants, among which were *Achimenes gloxinifolia*, A. Liebmanni, *Adonia versicolor*, *Fuchsia*—Fair Rosamond and Don Giovanni and double purple Chinese Primrose, all new and shown for the first time. John Lambert's gardener had a handsome collection. Roberts Buist's foreman, a fine specimen of *Zaechneria californica*, the first shown before the Society. Thos. F. Croft exhibited a collection of very fine Pinks and double Poppies. The Bouquets and designs of cut flowers displayed taste and judgment. The design by Isaac Collins, gardener to Gen. Patterson, was large and beautiful, the flowers which composed it were of the choicest varieties. Thos. Meehan, gardener to Caleb Cope, presented another of those large baskets the center of which displayed the 77th flower of the Victoria regia from the same plant, it was a beautiful speci-

men; also a pretty design of exotic flowers and a basket formed with native flowers. Robert Kilvington exhibited a large cone bouquet of native flowers and hand bouquets, and Thos. Meghran a basket of cut flowers.

The fruit table temptingly presented its delicious burthen comprising fine specimens of Black Hamburgh Grapes from Robert Egge's hoeses. 'Peaches, the Noblesse, Crawford's early Melocoton, George 4th and rarer varieties; Nectarines—the Pimston and Elrugo varieties; Plums—the Green Gage and Purple Gage from Caleb Cope's. The Musch and Baxter Seedling Apricot, Wilder Raspberry, Gifford and Muscat Pear, large yellow and large Green Gooseberries from Isaac B. Baxter. The The Moorpark Apricot from James Dundas. Five varieties of Cherries and one of Plums from Mrs. J. B. Smith's. Madelein Pears from H. W. S. Cleveland. Mier Plum by A. Parker. Cherries and Red Currants, by N. A. Roe; Blush Apples and Red Currants, by M. Snyder. Several varieties of Apples, choice kinds, and Peaches by John Perkins. White Currants from Miss Graiz's; Black Currants from J. Lamberti's. The collection of vegetables were really very fine and extensive, and from the following sources: Anthony Felten Jr., Thomas Meghran, gardener to R. Cornelius, John Miller, gardener to Joseph S. Lovering, Maurice Fini, gardener to John Lambert; Thomas Meehan, gardener to C. Cope and James Jones gardener at Girard College. Thos. P. James, Recording Secretary.

State Pomological Convention at Columbus, O., August 31, 1892.

Agreeably to a resolution adopted by the last Ohio State Pomological Convention, held at Columbus, Dec., 1890, it is the duty of the undersigned to make the call for the next session.

Therefore, in pursuance of such duty, and after corresponding with gentlemen in various parts of the state, we hereby request all persons interested in the subject of Fruit Culture, to assemble in Convention at Columbus, on the 31st day of August, 1892.

It is desired that fruit growers not only will bring specimens of fruits ripe at that time, for exhibition and comparison, but that they will also bring with them notes and observations relative to varieties ripening at other seasons.

Fruits intended for exhibition, or communications therefor, from those who cannot attend in person, may be directed to the care of M. B. Batesham, Columbus.

A. H. KRNST, President.

J. A. WARDER and F. R. ELLIOTT, Secretaries.

Genesee Valley Hort. Society.

This Society held its principal summer exhibition at Rochester on the 25th and 26th of June.

The display of plants and flowers was highly creditable to the contributors. The efforts of the managers of the Society have been liberally encouraged, and this was one of the best, if not the very best show of flowers and strawberries the Society has ever given.

There was a large collection of Summer Roses, Greenhouse plants, Floral ornaments, Bouquets, &c., including many new varieties of Ornamental Plants.

The exhibition of Strawberries was one of the best that has ever taken place, both in the number and selection of varieties, and in the fine growth of the specimens. R. G. Pardee, of Palmyra, exhibited about 40 varieties, including all the best standard sorts, and many new ones procured for the purpose of testing. Among the latter was Jenny's Seedling, which has proved rather productive, and promises to be a fine fruit. Prince's Charlotte, of fine flavor—and small specimens of McAvoy's Superior, from late spring transplanting, showing a decidedly good flavor. Hooker & Co. presented 10 varieties; Bassell & Hooker 11 varieties, and three new seedlings of their own raising, one staminate, and two pistillate, of good promise and quite productive, well worthy of further trial. M. G. Warner, 6 varieties, mostly of the best standard sorts. George L. Southworth, Burr's New Pine and Hovey's Seedling, of very fine growth. M. Jewell exhibited four sorts. Ellwanger & Barry presented 10 sorts, besides seven of their new seedlings, but their flavor generally did not appear to be quite so well developed as last year. Dr.

Long had two sorts; A. Frost & Co. fine Hovey's seedlings, and Sheppard & Cherry 12 sorts.

As the results of their examinations, the Committee have been led to regard with much favor, the following varieties:

Burr's New Pine, best and most valuable for home cultivation; Large Early Scarlet, early, productive, and the most valuable fertilizer; Scarlet Melting, exceedingly productive and easily raised—flavor moderate, and too soft except for home use; Rival Hudson, for a late sort, and for market and preserving; Hovey's Seedling, and Crimson Cone.

Champlain Valley Hort. Society.

The first Floral Exhibition of this Society took place at Burlington, Vt., on the 20th of June. The exhibition room was worthy of a visit, for its great beauty. The fine arch at the entrance, covered with evergreens, interspersed with roses and other beautiful flowers;—the festoons suspended from pillar to pillar, and also along the walls of the room, with wreaths containing flowers; the beautiful devise of Flora, at the farthest end, with her green flowing mantle, with her skirt of variegated pinks, and the wreath of roses swinging from her hands, together with the initial letters of the name of the Society and the date of the day, all in beautiful form and in "sweetest green," made a room dressed and decorated, such as we are certain is not often seen in New England.

The display of fruits and flowers, more than realized the anticipations of all.

Prof. Thompson exhibited some interesting specimens in Entomology in order to show "the enemies as well as the products of Horticulture." Among these specimens, were the Curculio, the Apple, Peach, and Locust Borer, in their various stages of existence, from the larva state to the perfect insect.

Buffalo Hort. Society.

The Semi-annual Exhibition was held on the 20th and 30th of June. Owing to the unusual backwardness of the season, the display was scarcely so fine as that of last year—many varieties of roses not being in bloom, and cherries, with the exception of the earliest sorts, not being yet ripe. The Hall, however, presented a beautiful appearance, decorated, as it was, with wreaths of evergreens, interspersed with flowers, and having in the center a beautiful floral temple. Many new and rare varieties, both of fruits and flowers, were for the first time exhibited—and notwithstanding the many unfavorable circumstances with which the Society was obliged to contend, the Exhibition gave general satisfaction.

The display of Strawberries was large, and in the opinion of the committee, excelled in point of quality and variety, that of any former show.

Answers to Correspondents.

RASPBERRIES.—R. R. (New-London, Ct.) Rivers' Everbearing Raspberry, does not continue to bear in this climate except it is planted on a moist soil, when it yields a good second crop in the autumn. Knevett's Giant is a better market fruit than the Fastolf—the fruit being nearly as large, and much firmer.

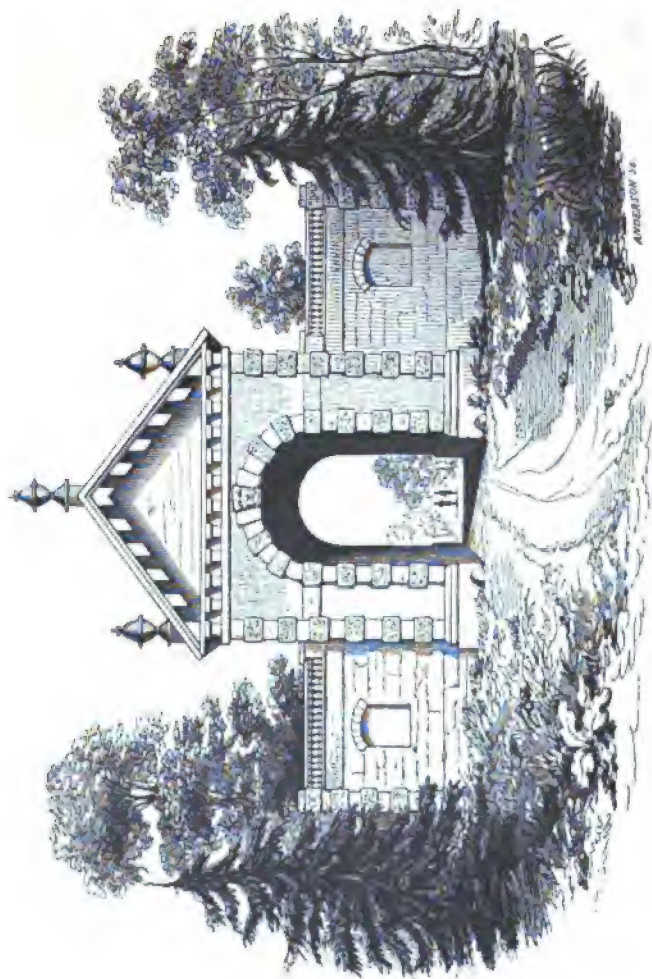
EVERGREENS.—F., (Lancaster, Pa.) The American Yew, is a native of the middle states—grows in several places on the Hudson. It is not properly a tree, like the European species, but a spreading shrub, about 3 or four feet high, the foliage and berries quite ornamental. It

loves the shade. You would have succeeded perfectly with the native Rhododendrons if you had taken the precaution to have made a bed or border for them in a shady place, and brought leaf-mold from the woods to plant them in. They will not grow for any length of time in common garden soil. C. (Boston.) The manure of the Lodi Company we found so well adapted to evergreens, is called by them simply "manure for shrubs."

INSECTS.—A Subscriber, (York, Pa.) The first Curculio comes out of the ground in the spring, just as the blossoms of the plum begin to fall. About three weeks after, the insect falls from the tree in the fruit, and goes into the ground—it comes out in a beetle form, according to some entomologists—while others say not till the next spring. At any rate, there are broods, less numerous than those in early spring, all through the summer—the later ones finding no fruit to sting, taking the young branches instead—and in the latter case the eggs remain in the branches all winter, and the complete insect comes out the following June. The insect flies at noon-day—but whether the male or female, or both, crawl up the trunk at first, is not known. J. A. C., (Boston.) The insect you describe as boring the leading shoot of your evergreens, is probably the Pine Weevil. The insect comes out in a perfect state about the middle of August, and when the ends of the branches are infected, they should be cut off and burned before that time, to prevent the laying of more eggs. Wash the ends of the shoots, both in spring and mid-summer with a thick paint composed of soft-soap, and tobacco water, to prevent the beetles from depositing the eggs. Any well decomposed compost is good for evergreens—avoid fresh animal manure.

HALF HARDY TREES.—An Amateur, (Richmond, Va.) All the pomegranates, both fruit-bearing and flowering varieties, will succeed with you if trained on a north wall or building, and the roots covered a foot deep with tan-bark in winter, and tops protected by a double matting. We do not think the Norfolk Island Pine will thrive out of a green-house with you. Cunninghamia sinensis is perfectly hardy south of New-York, and Cryptomeria even north of it.





Entrance Gate.

THE

Horticulturist

and

JOURNAL OF RURAL ART AND RURAL TASTE.

Mr. Downing and the Horticulturist.

WE had barely time to announce in our last number, the sad intelligence of the death of Mr. DOWNING. We had hoped to present this month, an elaborate memoir, prepared by an intimate friend of Mr. D., but unavoidable circumstances have prevented its preparation at so early a day. It will be given in a future number, accompanied by a portrait of Mr. DOWNING.

We cannot, however, suffer the occasion to pass without paying some feeble tribute to the memory of one who was endeared to every lover of his country—to every admirer of the beautiful, and expressing our ardent appreciation of his worth.

His sudden and untimely death has fallen with a crushing weight on the hearts of his friends, and upon the public generally, as a common calamity. The place he occupied is now a blank—the commanding position to which he had carved his way, will wait long for a claimant. Though comparatively a young man, he had earned a reputation for ability, and enjoyed a popularity, which few have been fortunate enough to win. Without the advantage of a liberal education,—forced from youth to rely upon his own unaided exertions,—at the early age of thirty-seven years he had elevated himself to an enviable rank among the first minds of the age. At whatever point of view we regard him, we are compelled to admire the symmetry of his character, the vigor of his mind, the versatility of his talents, and that healthful flow of enthusiastic feeling which marks his writings. There are those who can work out beautiful thoughts in marble, who can clothe them in the touching language of poetry, or bid them flow in the rounded periods and convincing strains of oratory, but few minds seem possessed of the power to add by art to the beauty of nature, and make the desert blossom like the rose.

Mr. DOWNING first claims our attention as a practical Horticulturist and Nurserymen. Unlike the majority of working-men, he did not busy himself exclusively in the manipulations and detail of his art, though in these eminently successful,

but labored to discover the *first principles* of his profession, and to bring it up to its proper rank in the science and the fine arts. When we consider the discouraging circumstances under which he wrought, both in the means of prosecuting his work, and the apathy of public sentiment, we wonder that he should have produced a treatise so perfect in its kind, so elaborate and finished as his *LANDSCAPE GARDENING*. He handles with apparent ease, the subtil topics of abstract beauty, the moral and social influence of its development in nature, and what is more remarkable, he is equally at home in carrying his theory into practice. This work first appeared in 1841, and though an elegant and costly book, has now passed through four editions. It was the first publication on the subject by an American author, and so completely unknown was the art, that the manuscript remained some time in the hands of the author without a publisher. It was, however, a complete triumph, and may be said to have almost created a taste for ornamental gardening—it certainly refined and elevated it.

The discussion of a disposition and adornment of the grounds pertaining to a residence, naturally led to the subject of *Architecture*. With all the branches of this art, Mr. DOWNING was familiar, and his *COTTAGE RESIDENCES* and *COUNTRY HOUSES*, display with great effect his admirable taste. He discusses the *meaning* and *expression* of Architecture, in a profound and comprehensive manner; and following, what seems to have been a motto with him—"Never to lose sight of good sense,"—he shows the absurdity of adopting ancient architecture as the highest form of the art, and argues the necessity of a peculiar national style of building. That he founded a distinct school, we do not assert; but from many sources, and particularly from his own varied culture, sound judgment, and correct taste, he drew just what seemed best adapted to the wants and capacity of the country.

The Fruits and Fruit Trees of America, which was issued in 1846, presents to great advantage, the pomological research and experience of Mr. DOWNING. This work is admirably executed, and has met with universal favor. These works of Mr. DOWNING have given this country a rank among other nations in Horticulture and Rural Taste, and exerted a wide influence upon the improvement of our own gardens and houses. Many a residence, beautified by his skill, many a smiling lawn, and gracefully disposed group of foliage, remain as fit monuments to his memory, and many a home, made happier by his teachings, will be saddened by his death.

In the editorship of the *HORTICULTURIST*, he has shown, perhaps, better than in his other writings, the peculiar fitness of his talents to educate the popular taste for the beautiful in nature and art. The success which has attended this periodical, and the increased attention which is being paid to Landscape Gardening, Horticulture and Rural Decoration, are proof of the beneficial influence of his labors. Whether we read his Letters from England, which exhibit a refined literary taste, and a delicate appreciation of, and full acquaintance with, the pleasures of a scholarly and cultivated mind, or the plain sayings and wholesome counsel of an "Old Digger," we recognise the same sterling sense and discriminating judgment. Mr. DOWNING was not by eminence a theorist. It was not his aim to build castles too grand and lofty for human realization, or to show the power of his intellect by forming conceptions, which imagi-

nation only could give being to. The great question with him, was, how much of the really beautiful can be made subservient to the public good? how far can elegance and utility be combined? how much of the spirit of the amateur can be infused into the mass of the rural population? He has answered these questions by his deeds.

MR. DOWNING was an American, and all his thinking and acting tended toward the welfare and elevation of his country. Very much of his deserved popularity is owing to his ability to popularise whatever he wrote upon. He seized upon what was most needed, and upon that alone, and with striking point and directness, presented it in such form, that his conclusions were irresistible.

His style of writing is unaffected and flowing, and his diction, though elegant and ornate, is never verbose or tiresome. Such a style grew naturally out of his characteristics of mind and habits of thought. His mind was furnished and cultivated, and his impulsiveness bore his thoughts by the nearest way to the desired end. This brings to notice that peculiar earnestness and sincerity which everywhere is visible in his writings. Neither a philosopher or an enthusiast, he combined the excellencies of both in his individuality. Above all others, he was the man best fitted to mould the architectural and rural taste of the country to a correct model, to guide public sentiment to whatever is highest in Nature and purest in Art, and to aid in making America what Heaven designed it should be, the garden of the whole earth.

MR. DOWNING has closed his labors too early to have shown the full maturity of his power. If his youth has been thus productive, what results might have crowned a longer life! what beauty might have sprung from a riper experience and an enlarging capacity!

About two years since, MR. DOWNING received an invitation to visit Washington, for the purpose of conferring with the President with reference to the laying out the public grounds in the vicinity of the Capitol. For the last year and a half he has been engaged in designing and perfecting his plans, and in accordance with them, a park of some 160 acres is being constructed. It will afford the only example of grounds to such extent, laid out by the rules of art, in this country, and will undoubtedly be a most perfect work of its kind.

In his private character, MR. DOWNING was upright, manly, and enthusiastic, and he entered with zeal and energy into every subject which promised to elevate and refine his fellow men. In his social relations he was a *gentleman* in the best acceptation of the term. Courteous, affable, and polite to the stranger; generous, warm-hearted, and confiding to his friends, he was universally respected and loved.

The sad circumstances of his death make us less reconciled to his loss. MR. DOWNING, in company with his wife, and her mother, sister, and younger brother, together with a lady friend, Mrs. Wadsworth, embarked on the Henry Clay, full of buoyancy and joyous expectation, on their way to Newport. Scarce two hours have passed, and that circle is broken. Some are sleeping beneath the wave,—others are weeping on the shore this wreck of hope and happiness. MR. DOWNING, his wife's mother, Mrs. De Wint of Fishkill, and Mrs. Wadsworth, were lost—the remaining members of the party were saved,—Mrs. Downing almost miraculously. As MR. DOWNING

was an excellent swimmer, he must have been borne down by the crowd, or perished in the attempt to save another's life.

We unite with his personal friends, and the many who are endeared to him by that charm which his writings breathed, in tendering our heartfelt sympathy to Mrs. DOWNING. We too can mourn that a great mind has been removed from our companionship,—that a noble heart has ceased to beat,—that a life rejoicing in such beauty and promise, has gone out thus early.

This sad event has thrown new duties and responsibilities upon us, which we shall endeavor faithfully to discharge. The taste for rural art which has already sprung up, the growing interest in Horticulture and Floriculture which is manifested on every hand, demand the continuance of a publication like the Horticulturist. That spirit of improvement which the well directed energies of our friend was just awakening into life, must not be suffered to die. Fortunately, the position which the Horticulturist has occupied is so well defined, and its past volumes are so replete with value, that we are not left without a guide as to our future course. We leave it for our readers to say how well the expectations held out in the very commencement of the work, have been realised; still it may not be inappropriate to refer to its general design and purpose, as expressed in the following language of Mr. DOWNING:

"In its pages, from month to month, we shall give them a collection of all that can most interest those whose feelings are firmly rooted in the soil, and its kindred avocations. The garden and the orchard; the hot-house and the conservatory; the park and the pleasure grounds; all, if we can read them rightly, shall be made to preach useful lessons in our pages. All fruitful and luxuriant grounds shall we revel in, and delight to honor. Blooming trees, and fruitful vines, we shall open our lips to praise. And if nature has been over-partial to any one part of the globe, either in good gardens, fair flowers, or good fruits,—if she has any where lavished secret vegetable treasures that our cultivators have not yet made prizes of, we promise our readers to watch closely, and to give a faithful account of them. Skillful cultivators promise to make these sheets the repository of their knowledge. Sound practice, and ingenious theory will be continually developed and illus-

trated. The humblest cottage garden, as well as the most extended pleasure grounds, will occupy the attention of the pens in our service. Beautiful flowers shall picture themselves in our columns, till even our sterner utilitarians shall be tempted to admire and cultivate them; and the honeyed, juicy gifts of Pomona shall be treated of till every one who reads shall discover that the most delicious products of our soil are no longer *forbidden* fruits. Whatever our own feeble efforts can achieve, whatever our more intelligent correspondents can accomplish, shall be done to render worthy this monthly record of the progress of horticulture and its kindred pursuits. If it is a laudable ambition to 'make two blades of grass grow where only one grew before,' we shall hope for the encouragement and assistance and sympathy of all those who would see our vast territory made smiling with gardens, and rich in all that makes one's country worth living and dying for.'

To carry out the intention here expressed, to so prosecute the work as to urge forward with steadiness of purpose and earnest effort, the impulses which our friend had roused to a good degree of activity, is our aim. The impetus, which, in all its branches, Horticulture has received, has made the demand for more ample information in the details of its successful prosecution, commensurate with its importance. That which, five years ago, would have been needlessly obtrusive, has now become a necessity, such has been the progress in the art of gardening. An increased attention to detail in the practical manipulations of the flower and kitchen garden, is called for, and may, we think, be combined with the more artistic and scientific branches of rural taste.

We are well aware that we shall labor under disadvantages—that he who was the

THE PLEASURES OF GARDENING.

master spirit in this art, is no more ; but may we not hope that echoes of his genius will come back to us from the smiling gardens and beauteous landscapes which his taste has rendered so expressive—that some other mind will kindle with the ambition “to make his country worth living and dying for,” and that the work which has been so auspiciously commenced, will not cease for lack of laborers.

For the present, we shall continue *THE HORTICULTURIST* under our own immediate direction, but hope, before the close of the current volume, to secure the services of a competent Editor, who will efficiently carry out the spirit and design of the work. In the meantime we earnestly invite the continued correspondence and assistance of those who have hitherto contributed to its pages, and such rough notes of experience as practical gardeners, nurserymen, and cultivators generally, may see fit to favor us with.

It is impossible to enter with too much zeal and enthusiasm, into this work. We cannot, with safety, appropriate the result of horticultural labors in other countries. Our tastes and wants are peculiarly our own, and must be fostered and satisfied with American talent and research. Knowledge in the abstract may satisfy the German mind ; the desire of supremacy may stimulate English energy ; the vain-glorious pride of excelling in rare and beautiful products, may induce the Frenchman to exertion, but different motives urge us, as American citizens, to beautify our country, and increase its cultivation. We want the ornamental and useful together,—we require facts as well as theories,—we build houses to live in as well as for effect—we cultivate gardens for profit, as well as beauty. There is, then, a broad field for the student of Horticulture, and a widening sphere for the taste of the amateur. If he “who makes two blades of grass grow where one grew before,” deserves well of his country, how rich will be the reward of him who brings forth the treasures of science to adorn the earth and refine the mind.

THE PLEASURES OF GARDENING.

BY WM. W. VALK, M. D., FLUSHING.

We are disposed to cull a flower from every field of the literature of gardening. Therefore, we pluck this from a rich soil, and offer it to the readers of the *Horticulturist*, for their admiration or criticism.

Perhaps not one among the many thousands of every class who read for amusement or for profit, but will admit that gardening has its *peculiar* pleasures. It is, indeed, an absorbing recreation, and among its votaries has ranked illustrious princes and renowned philosophers. The most eminent and worthy of mankind, whether occupying exalted positions in public life, or fulfilling the more retired and unobtrusive duties of a private sphere, have ever made it their favorite amusement. It is an enjoyment and occupation for which none can be too high or too low—at once the pleasure of the greatest, or the care of the meanest. The interest which flowers have excited in the breast of man, has, from the earliest ages to the present time, never been restrained to any particular class of society, or quarter of the globe. Over the whole world, nature seems to have distributed them as precious medicaments, to both the mind and body—to furnish agreeable sensations to its inhabitants, and to impart cheerfulness and beauty to the earth. In the joy

of his heart, the untutored savage binds his brow with the native flowers of his romantic haunts, while in every country, in proportion as civilization and refinement advances, so does a taste for their cultivation increase. It is for the love of a garden, that the most powerful influence is exerted in attracting men to their homes, and for this very reason, every possible encouragement that is given to promote a taste for ornamental gardening, secures an additional guarantee for domestic felicity, and the unity, morality, and happiness of the social circle. Nor must it be forgotten, that as a recreation it conduces materially to health, advances intellectual improvement, softens the manners, and subdues the tempers of men.

Of all embellishments, flowers are the most beautiful, and man alone, of all the sentient tribes, seems capable of deriving enjoyment from them. With infancy the love for them commences; throughout the period of adolescence and youth, it continues unabated, increasing with our years, and becoming a great and fertile source of comfort and gratification in our declining days. No sooner does the infant walk, than its first employment is to put a flower in the earth, and to remove it ten times a day, to wherever the sun shines most favorably. In the care of his little plot of ground, the schoolboy is joyously relieved from his studies, and loses all the anxious cares and thoughts of his tasks, or the home he may have left. In manhood, our attention is generally occupied with more active duties, or, by more imperious, and may be, less innocent pursuits; still a few hours employment in the garden, affords a delightful recreation, and as age compels us to withdraw from the busy cares of life, the attachment to flowers, and the delights of gardening, come to soothe the later periods of our existence.

In the growth of flowers, from the first tender shoots putting forth from the earth, through all the changes which they undergo, to the period of their utmost beauty, man will do well to behold and contemplate the wonderful process of creative wisdom and power. What can be more interesting than to watch Nature in all her progressive stages, from the planting of the seed to the maturity of the perfect flower? and who, upon observing the perfect order which prevails throughout her whole varied and extensive territory, and gazing on the delicate texture, admirable structure, and fairy pencillings of such a flower as the *Phaius albus*, but will exclaim, that

Nature is but a name for an effect
Whose cause is God. Not a flower
But shows some touch, in freckle, streak, or stain,
Of his unrivall'd pencil. He inspires
Their odors, and imparts their hues,
And bathes their eyes with nectar, and includes
In grains as countless as the sea-side sands,
The forms with which he sprinkles all the earth.
Happy who walks with him! whom, what he finds
Of flavor, or of scent, in fruit or flower,
Or what he views of beautiful or grand
In nature, from the broad majestic oak
To the green blade that twinkles in the sun,
Prompts with remembrance of a present God!

We view the bud as it swells, look into the expanded blossom, and delight in its rich tints and fragrant odors; but more than all, how great the charm in contemplating the precise conformation and mutual adaptation of its organs, and the undeviating regularity with which their various metamorphoses are effected; before which, all the combined in-

geniunity of man dwindles into nothingness. For, while the simple cultivation and management of flowers is productive of much innocent pleasure, how immensely is that pleasure enhanced, when science is secured as its auxiliary! The cultivator of flowers or fruit, on whom the light of science has just dawned, feels like one emerging into a new sphere of existence. A multitude of subjects, previously unheeded, present themselves to his consideration, which, as he proceeds to contemplate them, diverge into a successive series of interesting associations, and awaken in his mind emotions of pleasure and gratification, of which he had been hitherto unconscious. Instead of being content to follow blindly the ordinary routine of the management example has prescribed, he perceives that certain plants require a peculiar mode of treatment, and is led to inquire *why* that treatment is necessary. In prosecuting this investigation, other and more intricate subjects present themselves to his mind; thus inquiry begets inquiry, and one thought gives birth to another, until, in the solution of them, he makes the discovery, that all nature is governed by universal and unerring laws, that the annual changes to which plants are subjected are intended to answer specific and important ends, and that the whole chain of gradation in organized matter, is linked together in the most perfect harmony and order. This knowledge attained, he suffers not the most trifling of nature's phenomena to escape his notice. The development of a leaf on the most familiar tree, offers a field for his observation, for he learns that it is destined to bring forth, nourish, and mature a germ, which is capable of producing a distinct tree, that in process of time would equal or exceed in size, the parent that forced it into existence. He observes the autumn leaves in their fall and decay without regret, because they have duly performed their important functions, and knowing, that were they capable of remaining, they would probably excite the young buds into premature action, and cause them to fall a prey to the inclemency of the approaching season.

These are *some* of the delights which science affords, but they are not all, for it is likewise capable of imparting an interest to the most common operations of the garden. Why does the pupil of science scatter his seeds in the ground, and cover them with the soil? Because he knows that they must be thus enveloped, and excluded from the light, in order that the various genial gaseous elements involved in such a situation, may stimulate into action the vegetable vital principle; he knows too, that the soil must be spread over them very lightly, because a proximity to the atmosphere is alike essential to their germination. He watches the young seed lobes as they appear through the ground, and in imagination perceives the little rootlet issuing simultaneously from the newly excited embryo; soon the first leaves are formed, and calculating correctly on a similar extension and ramification of the root, the earliest opportunity is made available, to transplant it to its desired destination. This operation he either defers till dull and cloudy weather, or affords his plants an artificial shading from the sun. This shading they require, for all the delicate seedlings need time gradually to accommodate themselves to their new position. Were they *not* screened from the sun's rays, evaporation would become profuse, and the plant die, before it could absorb sufficient liquid nutriment, to counteract it.

But after all, it is needless for us to expatiate on such a subject, for the pleasures of gardening are not derivable from elaborate treatises, nor very easily communicable. To be properly appreciated, they must be diligently sought after, and when once tasted, the mind will rarely become satiated, but will rove as the bee, from flower to flower, in search of nutritive and delicious sweets, extracting from each successive object, fresh stores of wisdom and delight, till at length it succeeds in amassing that which most truly constitutes the wealth of man—a fund of knowledge of the great Creator's works.

ENTRANCES TO COUNTRY SEATS AND VILLA RESIDENCES.

[SEE FRONTISPIECE.]

EVERY traveller through England must have been struck by the effect produced upon its rural scenery, not only by the entrances to the more extensive parks of the nobility, but also by the numerous gateways and lodges which are found to almost every country house, and to the small pleasure grounds even of the suburban villas. Few, if any, appendages to a residence, which has only a limited extent of ground surrounding it, add so much elegance to its general appearance, or importance to its character, as does an entrance suitable to its position and extent. We say *suitable*, because much as the stately entrance arch, and its accompanying lodge, gives dignity to the mansion of the millionaire, a far less structure satisfies the requirements of the villa.

Whatever may be the beauty of pleasure grounds or the magnificence of the park, however diversified the ground, or varied the scenery of the landscape, unless the attention be arrested by a judicious entrance way, half the effect which the whole is calculated to produce, is lost. On the contrary, when upon drawing near a country seat, the eye is gratified by the elegance of the entrance gateway, proportioned to extent, and appropriate in structure to the principal edifice, an indication of refinement is conveyed to the mind, and we prepare ourselves, imperceptibly, to admire the beauties and embellishments which we expect to follow the fitness of the approach.

Take a few acres of our native wilds, where the undulation of surface admits readily of the production of diversified effect; cut down a few trees, leaving a group here, and there a noble denizen of the forest, to challenge the attention of the observer; then surround your domain with a fence, and place a good entrance gateway to the whole, and you have converted in a few hours, a wilderness into a garden, and taught the savage a lesson of civilization!

We have been gratified to see that this truth appears daily to become more and more noted around us. In the vicinity of New-York, and other parts of the country, we have observed many an edifice of the nature alluded to springing up, and with the view to foster so desirable and well directed a taste, we have presented our readers with an engraving in the present number, taken from an entrance gateway which has long been in high esteem with the landscape gardeners of England.

This arch is one which is adapted to grounds of considerable extent, and the mansion to which it belongs bears an architectural character in accordance with its general features.

It must be borne in mind, that the style of architecture of the principal edifice, and its size, must form the guide upon which the fitness of the entrance is determined upon. Nor is the position of less importance than the style. Whether it be a simple gate, an arch, or lodge, or a combination of more than one of these, the position of it should rarely, if ever, be parallel to the road of approach. A greater or less angle, the exact proportion of which should be regulated by the general features of the ground, will set off to much more advantage the pretension of the entrance, than will be practicable if it is erected on a line with the road. It should always be placed a few feet, and often some yards from the side of the road, and, if possible, in the immediate vicinity of a few trees, whose age and grateful shade, may add both dignity and beauty to the new erection.

PLUMS AT THE SOUTH.

BY WM. N. WHITE, ATHENS, GA.

A. J. DOWNING, Esq.—As the plum has ripened this year some three weeks earlier than usual, and the season is nearly over for taking notes upon it, we propose to continue our notices of southern fruit growing, by some remarks upon its culture, and notices of the varieties tested in this section.

This immediate vicinity is, perhaps, upon the whole, tolerably favorable to the plum. The Chickasaw Plum is found abundantly in every old field, and there is no very serious obstacle to the growth and culture of the improved species. We do not mean that the plum may be abused as the peach is—that you can plant a stone or a tree at random in an “old field,” or in a patch of Bermuda grass, and in two or three years therefrom gather an abundant crop—and in case the seed be of a choice fruit, very likely find your seedling of good quality—for such management will not do for the plum, unless it may be the native species. But though the plum requires some care and attention, there are few locations where it does not require as much, or where in the case of a few select varieties, the reward is more sure.

Our chief advantage is a complete exemption from the black knot; which in some parts of the north I have observed, is apparently as fatal to the plum, as the frost or fire-blight to the pear. This disease has never appeared here. In general, our trees appear perfectly healthy, and make a fine vigorous growth yearly.

We are, also, partially exempt from the curculio. He seems to confine his attention very much to Apricots and Nectarines—usually taking the whole crop of these fruits—but of plums, generally leaving enough of the crop not to render it unprofitable, without resorting to shaking the tree, or calling in the aid of fowls or pigs. Our stiff subsoil of clay and gravel, is too difficult to penetrate, perhaps, while the light gravelly loam that often overlies, is, in general, too shallow to give him a quite comfortable protection from sun and frost. But we by no means entirely escape.

In 1849, a frost in April destroyed all our Apricots, Plums, Peaches and Nectarines; and we were congratulating ourselves that the next year we should be free from curculio. As the destruction of fruit was complete, by all theory the curculio should have perished too. Will you believe it, when we state the obstinate imp utterly refused to sacrifice himself, to maintain even this most plausible of theories. It was absolutely certain, we thought, that die he must, yet he did not, and in fact, destroyed more fruit, if anything, than usual; so that if poultry and pigs are any protection, as they undoubtedly are, it must be by frightening him away, or rendering his haunts uncomfortable, rather than by any positive destruction to the curculio himself.

But, though exempt from the black knot, and partially so from curculio, we are not without some little troubles of our own. Occasionally a tree, or a part of it, dies in the same way as the apple, by the sun striking the trunk or branches. The plum is apt to throw out long branches, not much protected by foliage, which are sometimes blistered by exposure, causing the parts above to perish gradually, and if not removed, injuring the general health of the tree. This is not a very frequent disease, and shortening in the branches, as directed for the peach, will doubtless so clothe the limbs with foliage, as to prove an efficient preventive.

We find another difficulty in the want of adaptation of a good many plums that are

celebrated with you to this climate. You will observe that several classed in your work as best, here bear no comparison in flavor with some others regarded with you as not of the highest quality. We buy new varieties with the probability that at least every other one of those classed among the best, will be good for nothing. Still we know of several kinds of high flavor, and the rest we can let alone now we have the experience desired.

But our greatest obstacle in the culture of the plum, is its tendency, in common with several varieties of the peach, nectarine, and grape, to rot before maturing. In a dry season, no matter how hot it may be, the fruit is not in much danger. But in a year like this of warm, abundant and continual rain, the cultivator may expect to lose, in the case of most varieties, from half to three-fourths of his crop, and of some it may be the whole will decay. He can guard against this only by selecting the varieties least affected.

A good stock for the plum is the *Prunus chicasa* or wild Chickasaw plum of the country, which I believe is common over all the south, and collar or root grafting on the same is our usual mode of propagation. It sometimes throws up suckers, but they are easily removed, and it is uniformly hardy and healthy, and as the grafts take kindly, it is perhaps the best. It is a good stock for the garden for it dwarfs the tree, and, as in the case of the pear on the quince, the point of junction should be beneath the surface. The wild sloe, a small austere red plum, fit only for preserving, is sometimes used, but the grafts are sure to over grow it and perish for want of nourishment.

It is proper to state, before proceeding to notices of varieties, that the times of ripening below are for 1852, and will average two or three weeks earlier than usual, as I find by comparing the times of the few set down last year. The abundant rains too this year, may have so injured the flavor of some varieties, that full justice may not be done them. They are described in the order of ripening, and the dates given are when they begin to mature.

1. **CHICKASAW PLUM.**—*Prunus chicasa*—A tree or two of this plum should find a place in every garden, of both the red and yellow varieties. The fruit is much enlarged by garden culture—but the best varieties are later than the common ones—leaves lanceolate shape, more like the peach than a plum—branches thorny. Fruit small, (size of Mirabelle in your Fruits, or a little larger,) skin either bright red or yellow, somewhat translucent,—flesh yellow, very juicy and sweet, but somewhat astringent about the stone, to which it adheres. Ripe the 20th of May, and lasts nearly a month. From this will doubtless be produced many excellent varieties by culture and crossing. I have met one variety nearly a month later, marked with small yellowish dots, fruit almost the size of Prince's Yellow Gage, and nearly free from astringency. Can species of fruit trees as nearly related as this and the domestic plum, be crossed with each other Mr. Editor, with any prospect of producing improved varieties? This plum is I believe free from curculio; perhaps the fruit sets too early in the spring for him. It never fails of a crop with us.

2. **SEA OR EARLY PURPLE?**—Ripens the 8th of June, and is with us the earliest of cultivated plums. Fruit—small roundish; skin—brownish purple, (color of the Columbia,) with a scanty light colored bloom. Flesh—greenish yellow, sweet, juicy, and parts freely from the stone; highly perfumed. This nice little plum was, I believe, first introduced here by some grafts received from Germany. Has now borne some three years. Maturing so early, it is one of the most valuable. I do not find any description in the books with which it coincides. It does not rot.

3. **WILDE'S.**—Fruit—size of Imperial Gage, oval oblong; skin, rather thick, yellow or greenish yellow, with a white bloom. Flesh—yellowish green, pretty firm, dry, sweet, and adheres to the stone. Tree a good bearer. In 1848 we considered this the best early

plum; since then the Sea plum and Prince's Yellow Gage have come into bearing, and we now consider it as merely a good bearer of fair quality, not often affected with rot. Raised by Mr. Camack from a stone brought from Italy by R. H. Wilde. Ripe June 15th.

4. **PRINCE'S YELLOW GAGE.**—Received here under name of the Harvest Gage—ripe June 15th. It proves with us one of the very best. The tree is very productive and the fruit lasts a long time, ripening gradually for nearly a month. As it comes early in the season, while good fruit is scarce, is pretty free from rot and lasts so long—bearing an abundant crop of fruit of the best quality, sweet, juicy, and most agreeably flavored. I think it may be considered the most desirable plum here cultivated at present. Will supersede Wilde's.

5. **BREVOORT'S PURPLE.**—Ripe June 18th. Bore a fair crop of tolerably good plums, but not as good as the next, which ripens at the same time.

6. **ITALIAN DAMASK.**—Ripe June 18th, a fortnight earlier than last year. Tree productive—fruit sweet and fine flavored, worthy of cultivation, not subject to rot.

7. **WASHINGTON.**—June 20th begins to ripen. A large and handsome plum, and that is all the good we can say of it. The tree does not bear very well, and the fruit is dry and flavorless. This may be owing to the season, but, so far, upon the whole, it is not worth raising. It is much inferior to the Horse plum in quality.

8. **COLUMBIA.**—Ripens June 20th. This magnificent plum can hardly be praised too highly. It is large and beautiful—not much subject to rot, of excellent quality and sufficiently productive. Tree hardy. Should be in every garden.

9. **DUANE'S PURPLE.**—June 25th begins to ripen. A large fine looking fruit, very productive and fruit pretty good, with a pleasant acidity, quite juicy, somewhat subject to rot, but worthy of cultivation.

10. **KNIGHT'S LARGE GREEN DRYING.**—Ripens last of June—bears pretty well and not much subject to rot, but is too dry and lacks sweetness. It is a very insipid plum—not worth cultivating.

11. **BINGHAM.**—Ripe July 1st. One of the finest plums here grown, large, juicy, sweet, and excellent. Tree a fine grower and bears well. Indispensable.

12. **BLEEKER'S GAGE.**—Ripe July 1st, twenty-five days earlier than last year. An excellent plum, but not quite so valuable as Prince's Yellow or the Imperial Gage; worth cultivating.

13. **ELFREY.**—Ripe July 1st. You may be surprised to see the high opinion we have of the Elfrey. In this section it is a plum of high merit. In this opinion all who raise it here concur. Though the fruit is scarcely of medium size, this is more than compensated by its abundant crops. The fruit of the Elfrey with us is far from being dry. It indeed is almost as sweet and juicy as the Imperial Gage itself. Nothing but frost ever prevents its bearing a full crop of delicious fruit. It is the best flavored blue plum we have, and one of the best six varieties here cultivated. It rots a little, but there is always an abundance of good fruit in spite of rot or curculio. Tree thrifty and hardy. Indispensable.

14. **IMPERIAL GAGE.**—This is, to my taste, the most delicious plum here cultivated. The Yellow Gage and Elfrey rank next in this respect. Though I have placed the Yellow Gage as the first in all respects, it is from its season only. Ripe July 1st, and the fruit so gradually matures, that it lasts about a month. Is not much affected with the curculio, but rots considerably. Fruit very juicy and luscious, almost too sugary. A great bearer, and a fine hardy tree. Indispensable.

15. **HORSE PLUM.**—Ripe 1st of July. A hardy productive plum not much liable to de-

cay, but worth cultivating only for culinary uses, for which the Red Magnum Bonum and Duane's Purple, are much better.

16. **ST. CATHARINE.**—Ripe about July 5. This is probably the true name of a plum received here as the French Prune. It proves a pretty good plum tree, hardy and prolific. Flesh firm, rich and good flavored, but somewhat dry.

17. **DIAMOND.**—Ripe July 5th. Tree productive and hardy. Fruit of the largest size, but coarse and flavorless. Would do for the kitchen—but rots worse than any other variety except Smith's Orleans; not worth growing.

18. **MANNING'S LONG BLUE PRUNE.**—Ripe July 5. A pretty good bearer. Fruit large, handsome, and of fair quality. Will do to swell a collection, but would not probably get stolen where the Imperial Gage was abundant. Not very liable to rot.

19. **SMITH'S ORLEANS.**—July 5th begins to ripen. A great bearer, but extremely liable to rot. Fruit pretty good, and in good seasons it would be a profitable plum.

20. **GEN. HAND.**—Ripens July 8. Large and handsome, but the tree is not a good bearer with us. The fruit, too, we consider rather indifferent. Not worth cultivating.

21. **SEMIANA OF BOSTON.**—Bears a fair crop of harsh acid fruit, and is about the poorest plum we have. Ripe July 8.

22. **GERMAN PRUNE.**—Ripe about July 8. The tree is hardy, and bears exceedingly well, but the fruit is dry and indifferent. If it will make good prunes, might be worth cultivating, but not for the table.

23. **RED MAGNUM BONUM.**—Ripe July 10. The tree is a good grower and bearer—fruit very large and handsome; juicy and agreeably sub-acid. A fair plum for the table, and makes the very best of preserves. Not much subject to rot, and upon the whole, indispensable.

24. **BLUE PLUM.**—July 15. This is the not very definite name borne by a plum very well known in this vicinity. Fruit medium size, roundish, scarcely oval; suture very obscure; skin dark blue, with a fine light blue bloom; stalk three-eighths of an inch long, inserted in a shallow cavity; flesh yellowish green, juicy, sweet, and refreshing—adheres to the stone; shoots smooth; leaves rather small. A very pleasant and agreeable plum, and the tree is a fine bearer. It is generally propagated by suckers. Does not rot.

25. **JEFFERSON.**—July 20th it was ripe this year; last season the 7th of August. We are a little disappointed in the quality of this plum, as it is somewhat inferior to the Elfrey, Yellow and Imperial Gages, Blue Plum and Columbia. It lacks juiciness and flavor; but then it has merits which will always render it one of the most desirable of plums. It is of the largest size, and the handsomest of all plums. The tree bears abundantly, fruit hangs on a long time, and it is almost the only plum that is perfectly free from decay. It seems so far to defy the rot. It is also the latest plum that with us has come into bearing; and in spite of its defects, is absolutely indispensable, even in a collection of no more than three or four varieties.

A few other plums have borne here, but are not fully tested. The Green Gage died just as it commenced bearing. Huling's Superb, Lawrence's Favorite, Coe's Golden Drop and Sharp's Emperor, were invoiced, but nothing about the trees corresponded thereto, except the tallies. So of some others. A number of plums not mentioned, have not yet come into bearing here.

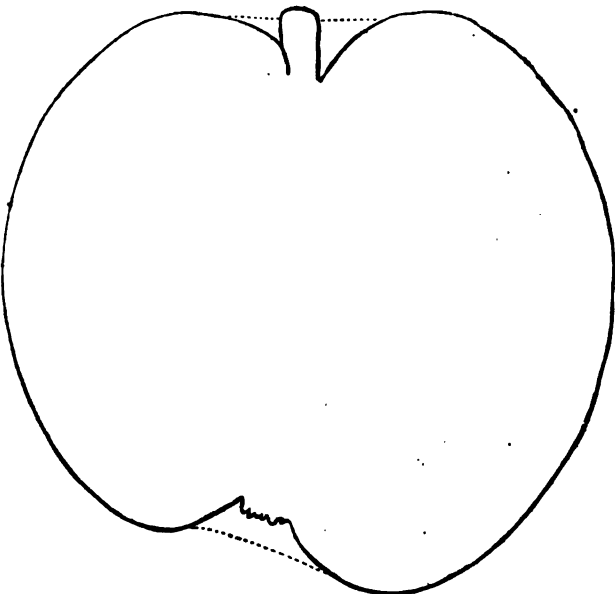
From the above list, which includes all that we can speak of with confidence, the most desirable three varieties that can be selected for a succession, are Prince's Yellow Gage, Imperial Gage, and Jefferson.

For best six, add Sea, Elfrey, (or Columbia,) and Red Magnum Bonum, for preserves.

Add to these Chickasaw, Bingham, Blue Plum, Italian Damask, Bleeker's Gage, Duane's Purple, and St. Catharine, for drying, and you have all that are desirable.

It is proper to add that these notes are not the result of my own observations, solely. In collecting material. I have been *greatly indebted* to Dr. WARD and Dr. CAMAK, of this place, both for the results of their larger experience, and for their kindness in supplying specimens of nearly everything which for four years past, has fruited in their fine collections.

Enclosed you will find an outline of the Horse Apple, which is unusually fine this year. In flavor and consistence it is more like the Rhode Island Greening than any other variety in my knowledge. It is a good cider apple, also.



The Horse Apple.—Average size.

A lady subscriber of this place has the Fastolf Raspberry, of which the flavor is very well, but of the little drupes or carpels which compose the berry, only three or four swell to each berry; the rest dry up and are abortive. The plants thrive well enough. Can this infertility be cured, and how? If not, the variety is worthless.

Two errors in the July number need correction. To destroy the woolly aphis, I directed the whole tree to be *washed* in soap-suds—not worked—which is nonsense. Again, the stem of the Red June Apple, is from one-half to three-fourths of an inch long, and not as printed, from *one and a-half* to three-fourths, which is incorrect.

Yours very truly,

WM. N. WHITE.

Athens, Ga., July 26, 1852.

THE PHILOSOPHY OF THE DESTRUCTION OF PLANTS BY FROST.

BY PROFESSOR LINDLEY.*

The past winter of such extraordinary severity, has led to a good deal of speculation as to the precise action of severe frost upon vegetation. As but little has been written upon this subject, in this country, we have thought it might interest our more inquiring readers to know the views of the principal European physiologists. Prof. LINDLEY gave, some

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time ago, an excellent abstract of their views, accompanied by some conclusions of his own, in the following article, which will repay perusal. *En.*

"In considering the various circumstances alluded to in this paper, I was naturally led to inquire into the exact manner in which the death of plants is caused by cold. Very little, however, is to be learned upon this subject from the writings of physiologists.

"The common opinion is, that frost acts mechanically upon the tissue of plants, by expanding the fluid they contain, and bursting the cells or vessels in which it is enclosed.

"M. Göppert, of Breslau, in a paper originally read at the meeting of German naturalists, at Leipsig, in 1829, briefly abstracted in *Oken's Isis* for 1830, p. 497, and translated in the *Edinburgh Journal of Natural and Geological Science* for 1831, p. 180, denies that this supposed laceration of vegetable tissue by frost, takes place. He is represented to have stated, that the changes which plants undergo, when they are killed by cold, do not consist in a bursting of their vessels or cells, but solely in an extinction of vitality, which is followed by changes in the chemical composition of their juices.

"Professor Morren, of Liege, in a paper printed in the fifth volume of the *Bulletin de l'Academie Royale de Bruxelles*, has published some exceedingly interesting observations upon this subject. Like M. Göppert, he denies the truth of the statement generally made, that frost produces death in plants by bursting their vessels; and he assigns the effect to other causes. His more important conclusions are, 1. That no organ, whatever, is torn by the action of frost, except in very rare cases, when the vesicles of cellular tissue give way, but that the vesicles of plants are separated from each other by frost, without laceration. 2. That neither the chlorophyll, the nucleus of cells, elementary fibre, amylaceous matter, raphides, nor the various crystals contained in vegetable tissue, undergo any alteration, unless, perhaps, in the case of amylaceous matter, which, in some cases, is converted into sugar, no doubt, in consequence of the action of some acid, formed by the decomposition of the organic parts. 3. That the action of frost operates separately upon each individual elementary organ, so that a frozen plant contains as many icicles as there are cavities containing fluid; the dilatation thus produced not being sufficient to burst the sides of the cavities. 4. That such dilatation is principally owing to the separation of the air contained in the water. 5. That this disengagement of air by water, during the act of congelation, is the most injurious of all the phenomena attendant upon freezing: introducing gaseous matter into the organs not intended to elaborate it, and bringing about the first stage in the decomposition of the sap and the matters it precipitates; so that with a thaw commences a new chemical action, destructive of vegetable life. 6. That the expansion of the cells, and aquiferous organs, drives a great quantity of water into the air-cells and air-vessels, so that the apparatus intended to contain liquid only, contains water and air, while that which is naturally a vehicle for air, conveys water. Such an inversion of functions must necessarily be destructive to vegetable life; even if death were not produced in frozen plants by the decomposition of their juices, the loss of their excitability, and the chemical disturbance of all their contents.

"Professor Morren's observations were made upon various plants frozen in the spring of the present year, having been exposed to a temperature of -4° to $+9^{\circ}$ Fahrenheit. One of his statements I give in his own words. 'In the parenchyma of many plants, and especially in that of succulent fruits, it is easy to ascertain what modifications are caused by frost in the internal organs of plants. If a frozen apple is opened, it is obvious that the ice is not a continuous mass, but that it is a collection of a multitude of little microscopical icicles. Under the microscope the fact becomes evident. We know how excessively hard some fruits become when frozen by this mosaic of icicles, especially pears. If

we thaw them, it is seen that on the instant a multitude of air-bubbles are extricated from the juice of the fruit, and that this juice has then acquired new chemical qualities. I wished to ascertain the cause of these phenomena, and the following is what observation has shown me. I studied for this purpose, more particularly the tissue of the apple. Each cell is filled with a small icicle, which has in its middle a bubble of air. We know that when water freezes, the crystals so arrange themselves, that the air separated from their mass by the solidification of the liquid is intercalated between their planes. This air also places itself in a mass of congealed water in a regular manner, the nature of which depends entirely upon that assumed by the crystals, as may be seen by freezing water in a cylindrical vessel, when the air-bubbles always assume the form of a very long cone, terminated by a spherical cap. The augmentation of the volume of water is in a great measure owing to this interposition of masses of air. All these effects take place in each cell of a frozen apple, which thus increases in size because each cell of its tissue becomes individually larger. When thawed, the cell recovers itself by the elasticity of its vegetable membrane, and frozen fruit becomes, as we know, very much shriveled. Each cell, therefore, acts like a bottle of frozen water, only there is no bursting, because the membrane is extensible.'

"But when plants easily killed by cold, are exposed to so low a temperature as that just described, it is to be feared that phenomena actually connected with the destruction of vegetable life, may be intermixed with others, which merely indicate the physical effects of cold upon vegetable matter already dead. For the purpose of judging how far this conjecture is well founded, I have carefully examined the *post mortem* appearances of several plants killed by exposure to a temperature artificially reduced only to from 28° to 30° Fahrenheit. These observations, while they have confirmed the general accuracy of Professor Morren's statements, have led to other conclusions which also appear important.

"I could not find the vesicles of cellular tissues separable from each other, even in the most succulent species submitted to experiment, and I conclude that this circumstance, to which Professor Morren attaches importance, and to which M. Payen ascribes the difficulty of extracting starch from frozen potatoes, is not so much connected with the destruction of vegetable life, as a result produced upon the tissue by a great intensity of cold. I did, however, find it lacerated in several cases, as if by the distension of the fluid it had contained. In a *Stapelia* the whole of the cellular tissue was soft, and deformed, as if it had been extended, with but little power of recovering itself again, and several large irregular lacerated cavities were observed. The same appearances were remarked in *Euphorbia Tirucalli*, but the laceration of the tissue was much less extensive. In *Hibiscus Rosa Sinensis* the cells of the cortical integument, (mesophloem,) were very much torn, and in *Hibiscus militaris*, not only the cells of the bark, but especially those of the pith, were so completely broken up, that it was difficult to obtain a thin slice of those parts for examination. In no case, however, have I found any kind of tissue ruptured, except the soft cellular dodecahedral or prismatical. It would also seem that M. Payen recognizes the laceration of tissue by frost, for he ascribes the acidity of frozen potatoes to an extravasation of the acrid matter which exists in the epiphloem of such tubers; and which, in a natural state, is locked up in the cells of which that part consists. Independently of these observations, it is not to be doubted that frost does split the tissue of plants. I saw the youngest shoots of *Erica mediterranea*, *cinerea*, and others, shivered into thousands of pieces in the Horticultural Society's Garden, on the morning of the 20th of January. The branches of the *Melaleucas* were rent to their points at Carclew. Several oases, among

others that of the common holly, were observed at Claremont, where the bark was split and rent asunder from the wood below it; and Sir Oswald Mosley has given me the following instance, which occurred under his own observation. 'An oak tree, growing upon the south side of a hill, in a sheltered situation, in Knightly Park, near Burton-upon-Trent, in the county of Stafford, was rent in the severe frost of last winter in two different places, to the height of thirteen feet three inches. There was an interval of eleven inches between the two shakes, which were each of them one-quarter of an inch wide, and extended in depth to the heart of the tree. The girth of the tree is six feet ten inches, and as soon as the frost went the openings closed again, and the tree is now as flourishing as ever.' To these cases many more might be added.

"The organization of woody tissue appears to be affected, but not by laceration. If a frozen and unfrozen transverse slice of the stem of *Hibiscus Rosa Sinensis* be placed, side by side, upon the field of the microscope, it is obvious that the diameter of the tubes of the wood and liber, is considerably less in the former than in the latter; this appears to be owing to an increase in the thickness of the sides of the tubes, which has the effect of diminishing their calibre.

"The expulsion of air from æriferous organs, and the introduction of it into parts not intended to contain it, is a striking phenomenon. Every one must have remarked that when a leaf has been frozen to death, it changes color as soon as thawed, acquiring a deeper green, and being of nearly the same depth of color on both sides; the same appearance is produced by placing a leaf under the exhausted receiver of an air-pump, and in both cases is owing to the abstraction of air from the myriads of little air-chambers contained in the substance of this organ. If the leaf of *Hibiscus Rosa Sinensis* in its natural state is examined, by tearing off the parenchyma from the epidermis with violence, it will be found that the sphincter of its stomates, the cells of the epidermis, and the chambers immediately below the latter, are all distended with air; but in the frozen leaf of this plant, the air has entirely disappeared; the sphincter of the stomates is empty; the upper and under sides of the cells of the epidermis have collapsed, and touch each other, and all the cavernous parenchyma below the epidermis is transparent, as if filled with fluid. Whither the air is conveyed is not apparent; but as the stomates have evidently lost their excitability, and are in many cases open, it may be supposed that a part of the air at least has been expelled from the leaf; and as the pith of this plant, in its natural state, contains very little air, and in the frozen state is found to be distended with air, it is also probable that a part of the gaseous matter expelled from the leaf when frozen is driven through the petiole into the pith. In the petiole of this plant are numerous annular and reticulated vessels, which, under ordinary circumstances, are filled with air, but after freezing are found filled with fluid; is it not possible that their functions may have been disturbed, by the violent forcing of air through them into the pith, and that when that action ceased, they were incapable of recovering from the overstrain; and filled with fluid filtering through their sides? That annular ducts are in some way affected by frost, was shown by their state in a thawed branch of *Euphorbia Tirucalli*, when they were found in a collapsed state, empty of both air and fluid, with their sides shrivelled, and with the fibre itself, which forms the rings, also wrinkled transversely. Facts of an analogous kind were remarked by me in *Erica sulphurea*. The minute long-haired leaves of this species are in their natural state firm, bright green, with a rigid petiole, and upon being exposed to pressure in a *compressorium*, at first offer perceptible resistance to its action, and afterwards, as the pressure increases, discharge, chiefly through their petiole, a great quantity of air. But leaves of this plant, which have been frozen by exposure to the tem-

perature of 27° are very different; they are softer, dull olive green, with a flaccid petiole, and offer but little resistance to pressure: yet, although they give way freely, the quantity of air which the compressorium expels is comparatively small, and readily driven out. Moreover, the long hairs of this plant, which in the natural state are occupied by fluid, were always found filled with air after freezing, and this without pressure having been exercised upon them.

"I am inclined to refer to this cause the well-known fact, of which many cases occurred this winter, that the sudden exposure of frozen plants to warmth will kill them; though they may not suffer if warmed gradually. In such cases, it may be supposed that the air, forced into parts not intended to contain it, is expanded violently, and thus increases the disturbance already produced its by expulsion from the proper air cavities; while, on the other hand, when the thaw is gradual, the air may retreat by degrees from its new situation without producing additional derangement of the tissue. It is also possible that leaves, from which their natural air has been expelled by the act of freezing, may, from that circumstance, have their tissue too little protected from the evaporating force of the solar rays, which we know produce a specific stimulus of a powerful kind upon those organs.

"These circumstances are, in themselves alone, sufficient to account for death being produced in plants by frost; and it is chiefly to such as these, that Professor Morren has directed his attention. It however appears to me that there are some other points of importance to which observers have not applied themselves.

"The green coloring matter of leaves, or chlorophyll, is certainly affected by so little as only two or three degrees of frost. In *Stapelia*, when thawed, it is found collected into clusters, and apparently half dissolved. In *Euphorbia Tirucalli*, when the plant is alive, it is extremely abundant, and consists of distinct spheroidal transparent particles, but, after a slight freezing, a considerable part of it disappears, and the remainder loses its transparency, becomes fusiform, is sometimes surrounded by coagulated gelatinous colorless matter, and many of the particles appear as if burst. In the green subcutaneous parenchyma of the leaf of *Hibiscus Rosa Sinensis*, the vesicles forming the sides of the air chambers are filled with distinct, angular, deep green particles, which, after freezing, become amorphous, and seem as if partially dissolved. It is possibly to the decomposition, of which these appearances are the incipient signs, that the extremely offensive odor of some frost-bitten plants, especially the *Laurustinus*, when thawed, is to be ascribed.

"The amylaceous matter, which is so abundant in many plants, also undergoes alteration. This has been remarked by Professor Morren, who found that when potatoes are frozen, a part of their starch disappears, leaving the deformed integuments behind it, and he suspected that the starch thus lost had furnished the sugar formed in the process of freezing this tuber. I believe it will be found a general fact, that starch is materially altered by frost, for I have always found that the amylaceous particles seem less abundant in a plant after freezing than before, and of those which remain, a part is generally becoming amorphous, clustered together, and certainly diminished in size. This is particularly striking in *Hibiscus militaris*. In that plant the cells of the pith abound in amylaceous granules, and are often quite filled with them; and they also occur abundantly inside the cells of the bark, of the medullary rays, and even of the tubes of the wood, and, in short, everywhere except inside the woody tubes of the liber; so that a thin slice of the stem of this plant, treated with iodine, forms a most beautiful microscopical object. But after being frozen, a great part of the starch disappears, and the particles which remain are not more than a half or a quarter of their former size. I have not, however, remarked among them any appearance of dissolving; neither have I been able to observe

any change in the curious double-headed bodies, in form resembling dumb-bells, found in the vessels of Euphorbias, and supposed to be a state of amylaceous matter, because iodine colors them violet; they appeared to me to be in precisely the same state before and after the plant was frozen to death. M. Payen, however, denies that any starch whatever is lost in frozen potatoes (*Comptes rendus*, vi. 345;) but as only a small part of his important treatise on amylaceous matter has reached this country, I am unable to state in what way he explains the action of cold upon this substance.

"Finally, it appears that frost exercises a specific action upon the latex, destroying its power of motion. If, as Prof. Schultz supposes, this is the vital fluid of plants, such a fact would alone account for the fatal effects of low temperature. In all the cases I have observed frost coagulates this fluid, collecting it into amorphous masses. In *Stapelia*, where the laticiferous vessels are easily found, the latex itself is so transparent, that it is difficult to perceive it in a living state, even with the best glasses; but after freezing it is distinctly visible, resembling half coagulated water. In the *Hibiscus* above mentioned, the stem is covered with long, rigid, simple hairs, filled with a plexus of capillary laticiferous vessels of extreme tenuity, but in which the motion of the latex may be seen beautifully with the one-eighth of an inch object glass of an achromatic microscope. Upon being thawed, after freezing, all this apparatus is found reduced to some misshapen separate sacs of fine grumous matter, in which no motion can be detected. That these vessels lose their vitality after freezing, may indeed be seen without the aid of a microscope; for if a stem of a *Ficus elastica*, or a *Euphorbia*, or any such plant, which discharges an abundance of milk when wounded, be first frozen, and then thawed, no milk will follow the incision.

"From these facts, I think we must draw the conclusion, that the fatal effect of frost upon plants is a more complicated action than has been supposed; of which the following are the more important phenomena:

"1. A distention of the cellular succulent parts, often attended by laceration, and always by a destruction of their irritability.

"2. An expulsion of air from the seriferous passages and cells.

"3. An introduction of air, either expelled from the air passages, or disengaged by the decomposition of water, into parts intended exclusively to contain fluid.

"4. A chemical decomposition of the tissue and its contents, especially of the chlorophyll.

"5. A destruction of the vitality of the latex, and a stoppage of the action of its vessels.

"6. An obstruction of the interior of the tubes of pleurenchyma, by the distension of their sides.

"These phenomena may be considered in part mechanical, in part chemical, and in part vital. The two latter are beyond our control, and probably depend, in part, upon the quality of fluid and organic matter, which may resist the action of the cold in different degrees, according to their various modifications; and, in part, upon specific vitality. Salt and water freeze at various temperatures, according to the density of the mixture, from 4° to 27°; oil of turpentine at 14°; oil of bergamot at 23°; vinegar at 28°; milk at 30°; water at 32°; olive oil at 36°; oil of anise at 50°; and it is not to be doubted, that in like manner, the fluid contents of plants, which we know are indefinitely modified, will resist the action of cold in very different degrees.

"The mechanical action of frost may, however, undoubtedly be guarded against to a great extent. It is well known, that the same plant growing in a dry climate, or in a dry

soil, or in a situation thoroughly drained from water during winter, will resist much more cold, than if cultivated in a damp climate, or in wet soil, or in a place affected by water in winter. Whatever tends to render tissue moist, will increase its power of conducting heat, and consequently augment the susceptibility of plants to the influence of frost; and whatever tends to diminish their humidity, will also diminish their conducting power, and with it their susceptibility; this is an invariable law, and must consequently be regarded as a fundamental principle in horticulture, upon attention to which all success in the adaptation of plants to a climate less warm than their own, will essentially depend. The destructive effects of frost upon the succulent parts of plants, or upon their tissue, when in a succulent condition, may be thus accounted for, independently of the mechanical expansion of their parts; indeed, it is chiefly to that circumstance, that Dr. Neuffer ascribes the evil influence of cold in the spring; for he found that at Tübingen, nearly all the trees contain eight per cent more of aqueous parts in March, than at the end of January: and the experience of the past winter shows, that the cultivation of plants in situations too much sheltered, where they are liable to be stimulated into growth, and consequently to be filled with fluid, by the warmth and brightness of a mild protracted autumn, exposes them to the same bad consequences as growing them in damp places, or where their wood is not ripened, that is to say, exhausted of superfluous moisture, and strengthened by the deposition of solid matter, resulting from such exhaustion."

HOW TO MAKE AN AMATEUR.

BY N. Y. H.

THE history of trees in the United States, has been too much after the following fashion; much of the land had the reputation, if it had not the reality, of abounding in chills and fevers, or fevers alone; whether the trees by causing dampness, or the unwonted exposure of the settler caused disease, the native forests were considered in fault. To some extent this was true, for till the country in many places, was cleared, and the sun, that vivifier and sweetener, was let in, miasmatic influences were more or less rife. Tree followed tree, and when they were all down, and the house built, the settler had what he believed he wanted—a *clearing*; he too often did not reflect that a belt at the north of his dwelling would keep the wintry blasts from roaming down his chimney, or protect his sheep and poultry. His wife wanted sun to dry the clothes, never thinking of thermometers at 90°, and a *clearing* both parties had. The settler, however, either moved further to swing his indiscriminating axe in the same manner, or, as many a sad history would tell, if it had a LAURIE TODD to commemorate it, he and his wife fell victims to over exertion and exposure.

The next owner is probably a man of more means; a little cultivated himself, he would like to see cultivation around him; he looks about for trees to fill the gaps so ruthlessly made, but sees or hears of none for sale in the vicinity, except it may be very small ones; so he either moves a few from the remaining "woods," without knowing what precautions to use, or adopts the small ones from the distant nursery. In either case, two owners must live under the influence of cold winter winds, and hot summer suns. What is to be done in the matter?

It is somewhat difficult to find an answer that will at once remedy the evil, but we will

quote CICEERO on the subject, as our best refuge for a reply. "If," says he, "a man would build, he should reflect a great while, and perhaps not build at all; but if to plant is the question, he should not reflect, but plant immediately." Wise CICEERO! no better advice could be given by the best modern editor.

What shall we plant, inquires the new owner of the clearing. We answer, take a little pains to plant trees for shade, that will produce something either in the shape of timber or fruit. What more ornamental trees than our true shellbark hickory, or the white oak; we have one of the latter now in our eye, not fifty years old, which is a model of strength and beauty; very sure, we are, that the owner, who planted it himself, would decline five hundred dollars for it; and certainly, in the estimation of every person of taste, it adds more than that sum to the sale value of his estate.

It is a curious circumstance which we have often remarked, that the generality of persons, whose attention has not been particularly drawn to the cultivation of trees, &c., are not aware what it is that produces their pleasure, when suddenly introduced into a properly planted and cultivated pleasure garden; they are surrounded by beauties, but they do not define, because they do not know the plants before them; yet something teaches them that they are in the presence of beauty and novelty; the whole effect is good, and they involuntarily exclaim, "how delightful! how we should like to live here!" Here is the intuitive love of nature. Let the same individual learn to know each particular plant, its history, origin, home, what length of time it has been introduced into gardens, its rarity, its uses, the height it attains, whether of rapid or slow growth, to say nothing of its botanical distinctions, and the enjoyment is increased a thousand fold; every plant so studied is an old friend, recognised and greeted wherever we go. There is no real knowledge acquired, that is not valuable and agreeable; botany, geology, astronomy, are continual sources of pleasure, whatever country we visit; let a person but thoroughly know the varieties of the rose by name and peculiarities of habit, and ever after a garden is visited with vastly increased delight; suppose that amount of knowledge multiplied by reading, observation, practice, and study, till we know in addition most of the new trees and plants, as well as those of older introduction; with what gusto and vivacity one searches for and sees a novelty of which he has only read. But we are straying from our clearing, for whose adornment this periodical has already given, and will continue to give, lists of the most valuable and easily procured trees, for shade and product.

After the planter has made up his mind what to plant for immediate effect, and what for posterity—for we hold the axiom, so often in the mouths of the unreflecting, that because posterity has done nothing for us we will do nothing for posterity, in utter abhorrence—he will ask his life companion,—she is entitled to be consulted in all such cases,—what fruits she most values; he will be glad to learn that by planting the Spanish Chestnut he can have a companion tree to his white oak, which, like it, will throw out its lateral branches, and spread over the lawn, producing in a very few years not only fine shade, but bushels of its large and delicious nuts to astonish and gratify himself and his visitors. So far he has cultivated himself, and bids fair to become an amateur; the clearing in his minds eye has assumed a new shape and value, and he takes to studying during the winter evenings, some further particulars; these acquire intense interest as he proceeds; books are consulted, but unfortunately books do not tell him *all* that he wants to know, for he has yet to learn his a, b, c, in horticulture. One great object of periodicals, like this, is to inform him. He does not know, perhaps, that yearling fruit trees can be had at Rochester, Flushing, Philadelphia, and other places, for a very small sum; that yearling pears, cherries, apples, plums, apricots, and so forth, of the finest sorts, grafted

so as to dwarf them, are to be purchased for the price of two or three shillings each, while apples, &c., are even cheaper. Where is he to get a catalogue? Let him look at the advertisements attached to this periodical, and selecting his nurseryman, commence his correspondence without delay, for every year's advance brings him nearer to the goal of his wishes. Let him at once read Barry's Fruit Garden, to learn the simple and best practical methods of trimming, and when his first year's purchases are in the clearing—our word for it, he has a source of pleasure in store, and baskets full of fruit in prospect, which will prove a never failing source of occupation, mental and physical, as long as he occupies his improving premises. These pets will be society to him in his otherwise lonesome hours; if he will at once take up the subject of a kitchen garden, his home is complete, the only danger being that he will not be induced ever to leave it. The first winter let him force a small hot-bed of salads and radishes, (with a corner filled with the most useful green herbs for his cook's especial delight) with his own hands, watching its progress, moving its shutters and glasses with every considerable change of temperature, reading up to his subject, visiting and observing his nearest successful neighbor, and he has out-door, healthful occupation for his winter, both day and night; such an amateur as our friend (for such we shall ever after call him,) has now become, will not go to sleep as soon as tea is over; he will read and re-read McMahon's Kitchen Gardener—one of the very best, *after all*, on the subject; Downing, Thomas, and Barry on Fruits, will become his manuals, while Parsons and Rivers on the Rose, will be consulted for a little variety. With what pleasure will he read Loudon and the horticultural and agricultural periodicals; we shall not despair in another year of seeing him bring into the parlor, for display to his neighbors, his largest pumpkin, which he remarks is a valuable article, it looks so like having *results*. A Ward's case, and a few house plants that will thrive in a sitting room, among which is a fine ivy in a receptacle large enough to contain its large roots, will make in-doors in a snow storm not only tolerable but delightful. Have we conjured up an amateur, by detailing the process by which this healthy action of the mind is produced? If so, we wish there may be thousands of these added every year to our population; thousands may be added, but we want thousands more.

N. Y. H.

CRITIQUE ON THE JULY HORTICULTURIST.

BY JEFFREYS.

How to Popularize the Taste for Planting.—A very palatable talk to all, except such professional gardeners and nurserymen as think that every thing they *give away* is lost. Yet your reasons why they should believe in such doctrine, are too palpable to be long resisted by them. Our agricultural and horticultural periodicals, are doing great things in this line, among our country people, and planting once *the fashion*, every body's house will be smothered in trees and climbers. Railroads, too, help the people to travel. They thus see what other folks do; and they—that is, the most observant of the travellers—go home and do likewise. Rely upon it, the taste for planting is in progress. Compare the recently built farm-houses all over the country, with those of our boyhood, and mark the change! Then, they were as utterly bare of trees as of out-houses; stood all alone by themselves, naked, inhospitable, and desolate to the eye. Now, even the same old tenements, inhabited by people of better taste, are changed in their outward style; various

offices are attached, and they are comfortably nestled amid the deep shadow of fine trees, and rejoice in plats of shrubbery and flowers.

It is wonderful to compare the taste of the laboring English with that of the same class of people in our own country. The one you can scarcely keep from cultivating his flowers; and if he, himself, has no time to attend to it, his wife and daughters will. The other you can neither drive nor coax into the slightest attempt of the kind. I have a quiet little cottage at one end of my principal farm—the tenement itself humble in appearance—scarce worth an hundred dollars. I put into it an American “hired man,” who chopped wood in winter, worked on the farm in summer, and was a capital hand at all sorts of rough labor. I had some fine young forest trees about the place, a comfortable garden stored with currant bushes, roses, and such like little affairs, as would make a laborer’s home cheerful—for I like to see every body about me in the enjoyment of such little pleasant things, not costing much, and looking pretty. When he removed into it, I told him how comfortable and convenient these little appendages would be about the place, yet observed the incredulous and staring look he gave me by way of reply. To cut the matter short, during the year the man occupied the place, his “young barbarians” hacked into, girdled, and spoiled several of my trees; the currant bushes were mostly stripped of their branches to carry into the “shanty” to pick the fruit from, while the cow came in to browse the remainder. The pig was let loose into the wretched, weedy garden, after the potato and cabbage patches were cleared, and he rooted up the roses and hollyhocks, and the place was sadly in ruins. When I remonstrated against such vile destruction, the answer was, that “they had no use for such knick-knacks, and didn’t see the need of them!” This man “walked Spanish,” of course, at the end of his year, and was succeeded by a quiet English laborer in like capacity, bating the “wood chopping”—Englishmen usually knowing little of such labor. And now came a change truly. “Oh, what destruction has been made here!” would he often exclaim. “I must fix these little things all up again. A nice bit of fruit we’ll get from these currants, and properly trimmed they’ll grow some good shoots again; and, sir, may I go into your *house-garden* and take up a few side-roots from the peonys and roses, and sum’nut of other things that can be spared, and put in here? for I hate to see a place naked, and without something to rest one’s eye on of a Sunday, and to give my wife a flower-pot now and then.” “To be sure you can,” was the reply, “and the more of them the better.” All this was done in the course of the spring, and no time lost either—for it was accomplished out of the regular work hours; and in less than a twelvemonth the place was turned into a little paradise, where I often drop in and take a quiet chat as I pass, and learn from the laborer and his good-mannered wife, much of the humble and rural life of England.

This, to be sure, is in a sphere below the class for which the article under note is intended. But it is a part of the system, and the subject. The parallel will hardly, perhaps, hold good with the higher classes in America, but the difference in the taste of the two people is surprising. This difference is partly incidental to the newness of our land, but much more owing to a *want of taste*—that’s the flat reason. Here, we go blundering and daunting along, looking to the “main chance,” and to the main chance only, as if to gather together dollars and estates, with which to bespoil our children who are to come after us—and in which latter purpose we usually succeed to admiration—were the only object worth striving for in life! On the whole, however, we are improving—but not half fast enough.

Plan for Industrial Universities.—It is quite apparent that Professor TURNER is no “old fog” in his notions of practical education. He is a man of sound sense and accu-

rate views on this subject, and when more men like him get control of these matters, we may expect some useful result from the vast means which our different states, and our general government, have at command for such purposes. But a host of literary "grannys," who think that "education" is only intended for "the professions," must first retire from the field. Railroads, steam engines, and telegraph wires, will run them off the track after a while, and the demands of the time will set the thing right. So we live in hope.

Birds, Insects, and other matters.—A man who writes with the perspicuity and force, of J. C. H., should tell us something to instruct as well as to amuse. There is pith in him, beyond question; and he holds a quarry of information behind these salient arrows which he lets fly with such facile directness. He has a kind heart too; otherwise he could not talk of the charming little birds as he does. But my friend, many of them *do* catch worms—caterpillars even—and bugs, and spiders, although you may not believe it.

Closing remarks on the Theory of Pruning.—This is a most comprehensive subject, and I regret that Mr. YOUNG has "closed" it so soon. The question of "pruning" cannot be fully treated of in a general way. It must be applied to limited culture, as in the garden, the close fruit yard—to dwarf cultivation in fact, where ringing, tortillating, and root pruning may be tolerated. Also, to open orchard culture, and on different principles altogether, in practice, from the other, to make it applicable and understandable to all who would profit by its discussion. Dwarfing is, in truth, a *perversion* of nature—not wrongly—but for our own convenience and profit; consequently it involves more labor, more ingenuity, and is attended with greater risk, and demands deeper knowledge, and observation, both in vegetable physiology, and in the composition of the soils which may be occupied. In open, natural cultivation, the true theory of pruning is simple. Nature will there do her own work, with a little aid in removing incumbrances and repairing accidents. These performed, as a general rule, the less "pruning," *scientifically*, the better. But, *good cultivation* should be given, *always*. The best orchards, probably, in the United States, are those which have received little aid from the saw and knife, except in infancy, but whose soils have been well fed, if not originally stored with proper food, and carefully tended. Nature, to be perfect in any of her works, should not be forced. *We* may be impatient. Not so *her*. In her elaborate and harmonious labors, time must be given for all things; and all we have to do is to understand what she intends, and only lend her that grateful aid which will be amply repaid in ten-fold blessings upon our endeavors.

Fruit growing at the South.—By "South," I suppose is here meant any territory below Mason and Dixon's line, for the neighborhood of Washington is not farther south than Cincinnati, which at the *real* "south," is called "north." It is a most refreshing idea to one who has the true feelings of an American about him, that there is a spirit waking up for good cultivation of any thing in that hitherto *tabooed* District of Columbia—as if it was not enough that the political bile of the country should concentrate there for its annual eruptions, but that its influence should keep one of the naturally loveliest spots on the globe, about it in a state of sterility. To foreigners, familiar with the capitals of their own country, after visiting Boston, New-York, and Philadelphia, Washington must look like a city of magnificent conceptions, wholly blocked out, partially built up, and then newly caught and squatted down into one of the most forbidding soils in the whole compass of the American continent. Instead of a place where the good taste and high cultivation of the several states should congregate and plant itself, to embellish the national capitol, every thing of the kind seems to have shunned it as they would an atmosphere of pestilence. I first knew Washington when a boy. Its market was then

supplied with miserable vegetables, raised by the neighboring "niggers," and who "trucked" their commodities to market in the oddest and most incongruous ways possible. A mule harnessed by the side of a broken down horse, or one of them "spiked" before a pair of the wretchedest "steers" on a miserable cart, or a worse waggon, and driven by an equally well conditioned "plantation hand," was the usual mode of transportation to the "city;" and these vehicles, with their appendages—that is, the jackasses and the "nigger"—standing in the open streets, were the "market houses" of the day. Starvelling poultry, and poor meats, were the companions of the meagre vegetables, and as for fruits, paw-paws wouldn't grow there, and persimmons were only in eating "after frost."

It is better now, somewhat, but Washington, in all these things, is a full century behind any other well conditioned town in America. It is a disgrace to somebody, that there is not higher and more abundant cultivation of fruits and vegetables in and about the place. The climate is delightful; bland as Italy, and inviting a world of vegetable wealth to its embrace. Prices are good, the demand for all edibles is steady and increasing, and why should not the country within sight of the capitol be a continuous and a perfect garden? I might guess, but that my solution might be offensive in some quarters; so I'll drop the subject. It is a good indication, however, that Dr. BAYNE has so spiritedly gone into fruit culture, and I hope that he will not only persevere, but that others will join him in such an important enterprise.

Memoranda on the Culture of Grapevines.—It appears, after all, to be a simple process to grow the best of grapes in a "cold grapery," to those who understand it. Some two years ago, I suggested in one of my critiques, the plan of getting up these establishments by contract, and on proper principles. Since then, I am gratified to learn, by his advertisement in your paper, that Mr. LUDLOW, of Yonkers, has undertaken the business, in which, I trust he has abundant patronage. I also suggested that a competent vigneron should plant the houses thus constructed, with suitable vines. Now, let me add a third requirement—which is, that in neighborhoods where these grape houses are built, competent vine dressers should establish themselves to prune and dress vines for those who need their services, in which occupation they would soon find abundant employ. Many people are deterred from building a grapery, from the fact that they cannot spare the time, and do not possess the knowledge of themselves to dress their vines, and cannot afford the expense of keeping a gardener for that purpose alone. They require only a small house and but a few vines for their family supply, and for the want of some such economical way of management, forego the luxury these would give them. Why should not vine dressing become a profession in America, as well as in France, Germany, or Italy?

Seedling Foreign Grape.—A most welcome subject—an *American* seedling grape from foreign varieties, as I understand it. As Mr. ALLEN was kind enough to send me, through your hand, a specimen of this beautiful production, for which he has my thanks, I can fully confirm the good opinion you express of it. The muscat flavor, to my own taste, is altogether to its credit, and I cannot but hope Mr. A.'s success in its cultivation, will meet his wishes.

The seedling grape of Dr. VALK, of Long-Island, described in the June Horticulturist, if he be not quite mistaken in its qualities, is an achievement in the *hardy* grape culture of the United States. Aside from the Isabella and Catawba, we have scarcely a good out-of-door table grape for the northern states. These, when they ripen well, are delicious, and perfectly satisfactory grapes—and that is praise enough. But we do want a good table grape

that is hardy in the open air at Boston, Albany, Buffalo, Milwaukee and Prairie du Chien; and if at Montreal, so much the better. At neither of these places can the *Isabella* or *Catawba* be depended on, and neither are fit for *house* culture, not producing their fruit in such high perfection as when suitably located in the open air. Dr. VALK is entirely right in resisting all applications for slips and buds of his vine, until he has thoroughly tested it under his own eye, and for a term of time in which he shall become perfectly satisfied of its productiveness, high flavor, and *hardiness*—wonderfully different in this from the empirics who flood and cheat the country with their new nostrums, before knowing whether they are worth the moss they are packed in, or not. If Dr. VALK succeeds in the anticipated qualities of his grape, his honesty of purpose will be amply rewarded in his success, even if he fail to produce his "ten, twenty, or a hundred thousand plants" for sale. But this he can do likewise. The latest discovery which I have noticed in the "native grape" invention, is from a Yankee manufactory, at Stafford, Connecticut, which I have seen figured, and published in sundry papers, and advertised extensively, with testimonials to match, from the neighborhood of the "Stafford Iron Works," all up to the mark in describing its "great size," "soft pulp," "thin skin," and "delicious flavor." Wonder if the "soft" pulp is soluble in *aqua fortis*! I was once at Stafford "Springs," and if that salubrious region of huckleberries, sweet fern, and iron ore, spontaneously produces such grapes as are thus described, it must be a rare spot of earth, indeed. Connecticut—all New-England as well—is full of small rapid streams, on the narrow bottoms or intervalles of which, grow thousands of wild grapes of many varieties, both in size and color, but with pulp as hard and indigestible as bullets; and this new "CHARTER OAK" grape, as it is so pretentiously called, to all appearance, is one of the same unadulterated type, which I have often plucked in my younger days, of equal size, and no doubt corresponding flavor. Of course, boys love grapes, and I often *felt*, when gasping to get their coarse, hard pulps down my throat, much as a young turkey *looks* when trying to swallow an acorn larger than its own head! But the "invention" has gone forth, and no doubt long before this, the peddlers of the grape are abroad, with vines duly labelled, and certificates amply verified, to edify the good country people with this "unrivalled discovery." A safe deliverance to the poor mortals who have to eat them! The only marvel in the whole affair is, that this wondrous fruit has never found its way "to the Editor of the Horticulturist."

TO THE PUBLISHER.—Since writing the foregoing, the sad intelligence of the untimely death of Mr. DOWNING, has reached us. To that portion of the public with whom he communed with his pen, or who enjoyed his personal intercourse, his loss is irreparable. Polished in his manners; highly cultivated in his profession; gentle in his disposition; kind in his intercourse; of exceeding ability and great resource as an editor and an author, his death has left a void not easily nor readily supplied.

For many years Mr. DOWNING has exerted a leading and commanding influence in fashioning the public taste to the rural embellishment of our country, in the construction of buildings, gardens, lawns, and pleasure grounds. With many he was a standard authority, and it is certain that to his fine taste and discrimination we are greatly indebted for much of the improvement which has been so extensively and rapidly made in our country residences and grounds. As a Pomologist he was sound and practical, and a leading spirit in the progress we have accomplished in that interesting department of cultivation. In the very outset of his career—a young man—with so wide a harvest of reputation, use-

fulness, and enjoyment, before him, it is sad to reflect that he is so suddenly cut off, and his agreeable intercourse, and valuable teachings, are lost to us forever!

"The glories of our birth and state
Are shadows, not substantial things;
There is no armour against fate;
Death lays his icy hands on Kings;
Sceptre and crown
Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade."

With Mr. DOWNING my personal intercourse had not been frequent, but always pleasant. I have partaken of the hospitalities of his late delightful, but now desolate home, on the banks of the Hudson, made classic by his own graceful pen, where his intelligent and charming conversation, and the gentle attentions of one now in the fresh agony of widowhood, will live among my happiest recollections.

Nor does the public press throughout the country, fail to give utterance to the sorrow which Mr. DOWNING's death has created. His loss is lamented as that of a public benefactor—one who labored for the good of his fellow men. His works will live long after him, and

"—time, the beautifier of the dead,"

will cherish his remembrance in the images of taste and loveliness which he has planned and executed in many a spot that knew only barrenness, till his ingenuity and discrimination had adorned them with the most graceful associations of rural life.

Honor—gratitude, to his memory! and although at the hazard of violating the proprieties of the occasion, by obtruding my own private griefs upon your pages, I cannot but lament, that in being forever cut off from my accustomed intercourse with one whom I held so worthy,

"I feel like one
Who treads alone
Some banquet hall deserted;
Whose lights are fled,
Whose garlands dead,
And all but he departed!"

JEFFREYS.

CULTURE OF THE GRAPE IN COLD HOUSES.

BY A. MESSER, GENEVA, N. Y.

MR. L. TUCKER—The late Mr. DOWNING, whose melancholy death we sincerely mourn, expressed himself much pleased with a statement made by Mr. CHORLTON, describing his management of a vinery. It was in the Horticulturist of February last. I have reason to believe that all those who are attempting to grow the foreign grape under glass, were highly entertained by the article. The editor said that there were many others in the country who *might, if they would*, furnish a report of their experience. I was entitled to think myself in the number; and although my grapery is small, and built in a cheap manner, and the vines now growing only the third summer; and although gardeners are not to suppose that all they have to say, is worth printing, still I would like to make

a few suggestions, and fondly hope, at the same time, that they will elicit from others, additional information. Not to give an account of my management in full detail, I observe that I have endeavored to follow the best examples. And now at this date, (Aug. 10,) in a cold house, the Royal Muscadine is transparent, of an amber-like color, and almost ripe; the Black Hamburgs also are rapidly coloring. The growth has been all that I could expect; the vine and fruit free from mildew, or any disease whatever. I have expended but little money, but have given much personal attention to the vines.

The writer has been much gratified by often inspecting the grapery of Mr. H. L. SURDAM of this village, who obtained the second premium at the agricultural fair last September. His house, though not large, is 30 feet long, of which the side of his barn makes the back wall. He has 12 vines in front, and eight or nine in the rear. This experiment is, on the whole, pronounced to be very successful. He enjoys the advantage of an open exposure, and has never been troubled with mildew. The older vines in front, are now laden with beautiful fruit, of luxuriant growth, and which in this vicinity, is the grand point of attraction for amateurs in grape cultivation.

Having occasion to go to New-York, two weeks ago, I availed myself of the opportunity, to go over to New Brighton and look into the vinery of J. C. GREEN, of which Mr. CHORLTON has the management. The vines appeared healthy and flourishing, and were well laden with fruit; it occurred to me, however, that the number of clusters was too great for the aliment which had been furnished to the border. There is much danger of over-cropping. It is to be remembered, that these vines were put out two years ago in April last, in a *very rich border*,—60 barrels of bone dust, and 40 tons of stable manure, having been used in its construction. The first summer's growth was astonishing; perhaps unparalleled in this country. It is in vain to expect a similar growth the following season, or this present season, with ordinary rates of manuring. If one half the quantity of bone dust and stable manure had been used, and a suitable lot of whole bones, or cattle's feet, or slaughter house offal, had been added, the fertility of the border would have been more permanent at less cost; and the gardener on the Island would have been, probably, quite as well satisfied at the present moment. A good layer of compost, in early spring, and a semi-monthly treatment of soap suds, will be of great importance to the vines next year. The vine is truly "a gross feeder."

One word about our friend's mode of pruning. Is there not danger that the spurs or branches, as they put forth horizontally, will meet and interlock with each other? and in such a case, will not the house become too much shaded? It is the habit of some varieties to push their horizontals many inches, before the fruit is located, as in the White Muscat of Alexandria. It must, therefore, be stopped at the first bud beyond the cluster, or the allotted space will be all used up. The operator may, perhaps, flatter himself that he shall keep the fruits "at home" in future, because he has a bud on the lateral, near the main stock, for fruiting next year. But never fear a want of buds, where the vine is strong and ripe, and has laid in a good supply of organizable matter. Germs will show themselves; "nature will out," and I should like to see the experimentalist who should propose to prevent fruiting by cutting all the spurs smoothly and closely to the main stem. The preserving of an open space between the vines, in a span roof house, may not be so essential; but it is quite important in the "lean-to" graperies, so that the sunlight may be reflected from the back wall.

By a recent and careful observation, at all those points, where I have had an opportunity, I have discovered my own errors, at least in part. At the outset I failed in the border. It was deep enough and suitably drained, but organic manures were furnished too.

parsimoniously. There was not enough to furnish the phosphates, or a copious disengagement of nitrogen. Professor NORTON's lectures in Albany, were exceedingly useful to me. Another mistake was to allow the sash to remain with bad joints, so that a uniform temperature could not be maintained. After fitting the sash, I found a great difference. In the early part of the season, the house has been kept closed, a larger part of the day than in previous years, and with decided advantage. True, Mr. DOWNING says, "Plenty of sunlight, plenty of air, and plenty of moisture," are his fundamental principles for grape culture. But if the house is open too much for air, the calorific escapes, and the moisture evaporates. I have never kept mine so close before, and never before had such growth of wood, or such perfection of fruit. Being too much shaded by some forest trees, behind which the sun retires at 3 o'clock, I have laid some old sash on the border out side, and so have obtained a temperature suited to the wants of the roots. Under the glass, the vapor is also condensed, and the roots find a grateful moisture, to the very surface of the ground. The border is mulched with tan.

With these comments, which appear sufficiently egotistical, I conclude, observing that if others can derive any, even the smallest profit, from these speculations, I shall be satisfied. And I hope also, to offer reasons, at a future time, why many others would do well to commence the building of a vinery.

A. MESSER.

Geneseo, Ontario co., N. Y.

FRUITS vs. INTEMPERANCE.

BY JAMES RICHARDSON, JR.

THE grand mission of the horticulturist, in subduing, cultivating, and embellishing the earth,—of rendering the outward world a Paradise,—a garden of beauty and delight, (as the word Paradise literally imports,) is as yet but little understood and appreciated in all its length, and breadth, and glory, by even its most distinguished apostles and earnest and enthusiastic devotees. For it shall be his office in the coming age, not only to transform the face of nature, and through the hints and suggestions everywhere given him by the Divine Creator, to deduce order and beauty from the surrounding chaos, but to have a very important and powerful influence upon the life and culture, the health and happiness of man. The civilization of man, and that of the earth indeed, always go hand in hand, and each acts upon, and advances the other. By the greater abundance and improvement of grains and vegetables, and especially by the increase of various and luscious fruits, a very striking change is to be made for the better, in the manner of human living, in the regimen and nourishment of the human body, and hence, in the purity, activity and beautiful development of mind and soul. How much more poetical, how much more refined and elevated, as well as beautiful and exhilarating, is a table glowing with the various melting and luscious fruits in their season—the dewy, delicious strawberry, the fragrant raspberry, the ruby cherry, the tempting paradisaean nectar of peach and apricot, plum and pear, and the glorious clusters of the rich and juicy grape, with the cooling and refreshing waters of cantelope and melon, accompanied by simple farinaceous articles of diet, than a board covered with the flesh of beasts, however delicately cooked, and with various spiced, unnatural, and unholy mixtures of cake, pastry, &c. Think of father Adam slaughtering an ox in Paradise, or the delicate fingers of his fair and gentle partner,

dripping with the fat of a roast spare-rib, as her divine features become scorched and em-purpled over a blazing fire.

We believe, most fully, from personal experience, as well as observation, that an abundant use of fruits has a strikingly delightful and elevating influence upon the animal spirits, as well as upon the mind and soul; that the constant habit of employing fruits will cure many diseases, and have a most beneficial effect upon the health of the individual, and the race, and prove, next to air and water, the greatest of all preventive medicaments. Indeed, as for ourselves personally, through spring and summer, autumn and winter, our breakfast is made almost exclusively of fruits. These we will have, and using no other luxury, we think we have a right to use them at any cost. At the same time, we feel it to be a high and holy duty, which we owe to the race, *to do all in our power to render fruit so abundant and cheap, as to fall within the means of our poorest brother*, and gladden, with its nutritious and exhilarating juices, every child in the land. We do not labor merely that this princely merchant, and that lordly nabob, should have his table loaded with choice "specimens;" but that every man, woman, and child, month in and month out, should revel in these delicious and healthful luxuries, till they become the cheapest of common necessities. And let the true friend of our noble art but do his duty, and this can, and it will be accomplished.

We even go so far as to believe, that such a blessed consummation would do more than aught beside to banish dram-drinking, wine-bibbing, and intemperance, from the land. For these habits are to be attributed, in the main, to a craving for the sparkling and exhilarating juices, the grateful and healthful acids contained in fruits. And the truth of this statement will be evident, if we consider that principally, from the juices of fruits, come all our various wines, exhilarating liquors, and intoxicating beverages. It was one of the methods early taken to lengthen out and perpetuate the season of fruitage. The less abundant of fruits were dried in ovens, or hung up in the solar rays, and the juices were expressed from the more prolific and plentiful varieties. As from the apple, cider; from the pear, perry; from the grape, wine and brandy; and hence, elder wine, currant wine, &c. At first, indeed, this method was employed only on a limited scale, in the very season of fruits, and the juicy clusters of the grape were pressed into the crystal or golden goblet, as we now squeeze the orange and the lemon for our delicious orangeade, or the cooling sherbet of lemons. As we read in holy writ, "I took the grapes and pressed them into Pharaoh's cup, and gave the cup into Pharaoh's hand," (Genesis XI. 11.) Gentlemen, indeed, in the constant habit of employing wine and liquors, say to us, "Oh! with such fruits as these, I should not care for wine, and should soon give up all relish for drinking." Let us make the various delicious fruits so plentiful, as to be within the reach of every man, even the poorest and the humblest, and we shall do more for the cause of temperance, and truly good-living, than all the Maine liquor laws and temperance lecturers in the world; for we shall thus destroy utterly, the the corrupted and perverted tastes of men, and restore them to the original beautiful and wholesome simplicity of nature.

JAMES RICHARDSON, JR.

Greenfield, Mass., July 28, 1852.

ON THE CULTURE OF THE NARCISSUS.

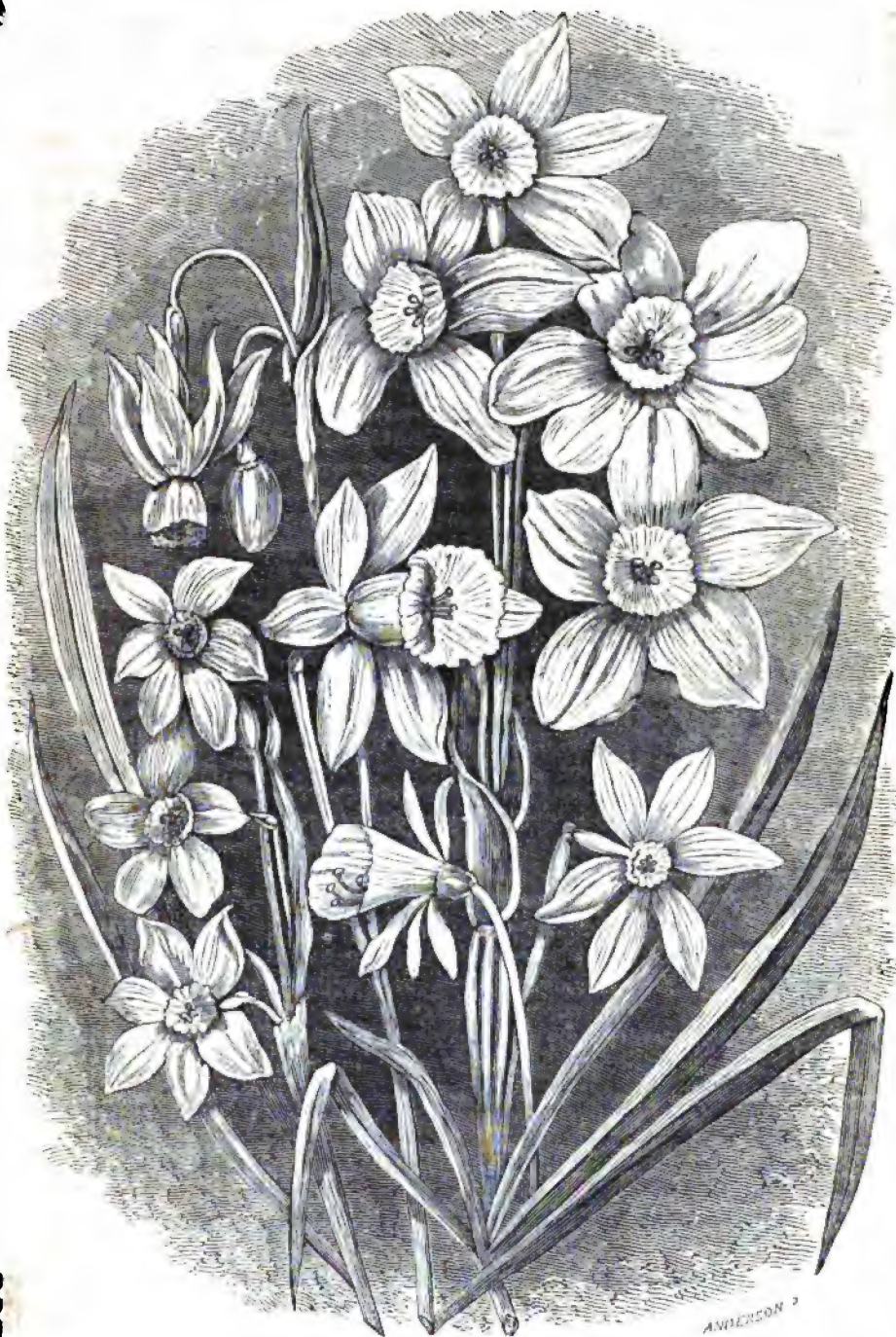
BY JUVENIS.

MR. EDITOR—The Narcissus is a flower the cultivation of which is neglected more than it ought to be, and I am desirous of calling the attention of your readers to some of the best species. With this object I have sketched a few of them, and if you can find room for them in one of your numbers, before the fall, I doubt not, that amongst your numerous readers, many will try for once a few Narcissi, who have never grown them before; and I promise them a gratification if they do so, that will induce them to repeat the experiment.

In the sketch which I send, the flower with reflexed petals on the left hand of the group at top, is *N. Cernuus*. Immediately below it are three flowers of *N. Jonquillus*, (the common Jonquil.) In the centre of the group is *N. Albicans* with its beautiful bell shaped cup, and below it *N. Conspicuus*. On the right hand of the sketch, is the magnificent *N. Trewianus*, more generally known by the gardener's name, "*Bazelman Major*," (one of the polyanthus varieties,) and below it is the elegant *N. Poeticus*.

For culture in pots, the *Polyanthus* species is the most showy, and several of the best and most distinct are always to be met with in the annual catalogues of our seed stores; and of them, the varieties named *Grand Monarch*, *Grand Primo Citronier*, *Soleil D'or*, and the *Bazelman Major*, are the best worth cultivation. All these sorts do admirably well in pots. The bulbs of all the *Polyanthus* tribe of *Narcissi*, for pot culture, should be large, none less, and some exceeding in size a fine *Hyacinth* root. Although almost any soil will serve to grow them tolerably well, yet, of course, they are materially benefited by one specially adapted to their nature.

I have grown them with uniform success in a compost, consisting of rich loam with an equal quantity of old hot-bed manure, and about a sixth in bulk of white, fine sand, mixed together. The pots in which they are grown should bear reference to the size of the bulbs. There should be at least an inch clear space between the diameter of the bulbs and the sides of the pot. In October or November (the earlier the better) plant the bulbs in the above compost, taking care that it is well pressed down round the bulb, so as to have the latter *firmly* fixed in the pot. When all are potted, place the pots in a frame or in a cellar, and cover them over with any dry material, such as coal ashes, sand, or even loam, for I have used each with equal success; but the last named must not be used if your pots are in a situation exposed to wet, which they ought not to be. This covering should be of the depth of at least eight to twelve inches; because when the bulbs begin to put forth their roots, the force exerted by them is much greater than would be supposed possible by those unacquainted with the fact; and unless the superincumbent weight is considerable, the bulbs will be completely raised out of their pots by the reaction upon the bulb of the force exerted by the roots in pushing themselves through the soil. The pots should remain in this situation for at least six weeks or two months, during which time they are in the most favorable condition they can be for forming roots; and they may be so left with advantage until it is wished to bring them forward into bloom. About the middle of December, this operation may commence, though to have a fine head of bloom, it is desirable to delay it a month longer, as the *Narcissus* will not bear such early forcing as will the *Hyacinth*; I mean to produce a proportionately good flower. Whenever it is determined to commence forcing, the pots must be taken from under their covering with care, (for the stem will have shot up from one to three or four inches, into the



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ashes or other covering,) the outsides of the pots washed with a sponge, and they may then be placed in a moderately warm hot-bed or in a green-house or parlor. I have grown them as fine in a room as ever I did in my green-house. Of course the period that will elapse between their removal from their first situation to the time of the expansion of their bloom will depend upon the degree of heat to which they are subjected. The more gradually they are brought forward the finer will be the bloom, and in any event they should not be, for the first fortnight, in a higher temperature than from 55° to 60° Fahrenheit; which will be quite sufficient to bloom them in perfection; but if it be desired to hasten the bloom, the temperature may be increased after a fortnight or three weeks, gradually, by 10° or 15°, which will expedite their progress. After the pots are taken from under their first covering, they must be moderately watered occasionally, so as to keep the earth moist, but by no means to an extent which will render it of the consistence of wet mud, which I have sometimes found my lady friends think essential to the well doing of their bulbs. When the bloom buds have begun to expand, the quantity of water may be increased; this if accompanied by a slight increase also in temperature, for two or three days, will add to the size of the bloom.

The Polyanthus Narcissus also grows well on water, in Hyacinth glasses. Its treatment is precisely like the Hyacinth. When first placed in the glass, the water should not be allowed to touch the bottom of the bulb, but the glass should be filled to within half an inch of it. The reason for this is, that if the bottom of the bulb is permitted to rest in the water, the outside coats of it become decomposed by saturation, and a slimy result is formed, which putrefies, and decay of the bulb is frequently the consequence. Until roots are protruded, it is best to place the glasses in a dark closet, as it is found to be a law in vegetable physiology, that darkness is favorable to the formation of healthy roots, which are produced under such circumstances, also more speedily than when exposed to the influence of light.

There is another species of Narcissus which should always be grown, and which may generally be found in the early autumn, in the seed stores, before the other sorts arrive. It is called the Double Roman Narcissus; and another from the neighborhood of Mount Vesuvius, N. Papyraceus, (the paper white of the shops.) The Double Roman and the Paper White, will both bear forcing much better than the other kinds, their season of blooming in their natural habitat, being from one to two months earlier. I have for years grown this in my parlor only, and got it into bloom by the first week in January, and any one may do the same by simply following the plan I have given above, only that to have them in bloom thus early, they cannot be allowed more than a month or so to remain under ashes—for you can seldom buy the bulbs until the middle of October, and in the parlor where my family sit, (with a fire of course, at that time of year,) they take six weeks to bloom from the time they are brought in. No bulb can be got to bloom in anything like the same perfection, so early in the year as this. Indeed, I have several times had them with some flowers open on the 25th December.

The scent of the Double Roman is strong, and to many very agreeable; but in odor all must yield the palm to the delicious Jonquil. The bulbs of the Jonquil are small, and three or four should be placed in a pot of the same size as is used for the larger varieties. The pot culture of the Jonquils is precisely the same.

No object amongst our early spring flowers, is more beautiful than the Narcissus, for the flower garden. Any of the varieties may be planted in the open border in the fall of the year; they should be placed deep enough in the ground for the bulbs to be covered four inches, and their situation should be a short distance from the edge of the border,

with Crocus or Snowdrops, or some low growing plants in the foreground. It is not necessary to lift the bulbs every year, but once in three years they will require it, to separate the offsets. With regard to soil, they will thrive very well in any tolerably good garden ground; the richer it is, the larger and more numerous will be the flowers, and they will form a most interesting contrast to the Hyacinths, which should be planted alternately with them. The effect thus produced is more pleasing to the eye, than when they are placed separately in beds, as is sometimes done.

When out of bloom, (if grown in pots) the bulbs should be turned out, and planted in the garden in a newly dug piece of ground, placing them a foot apart every way; and in a situation where they get but little sun; and if well watered, daily, for two or three weeks, *until the ends of the leaves begin to turn yellow*, (from which time no more water must be given,) they will bloom again the following year. They should be taken up in the end of July, and then dried in the sun, with a sheet of paper or cloth thrown over them to prevent their drying too rapidly. I have grown the same bulbs with very tolerable success for several successive years.

THE FERTILE CURRANT OF PALNAU,

BY BAPTISTE DESPORTES, ANGERS, FRANCE.

It is generally known that France is the country, where, thanks to the climate and the nature of her soil, fruit attains the highest degree of perfection; and where, for the same reason, the study of them has become both easy and attractive. And in this country thus favored by nature, some cities, amongst which I mention two, Tours and Angers, have distinguished themselves particularly, by their superior culture of them. In the first named city, our respected friend, Dr. BRETONNEAU, who is equally eminent for his studies of plants as of natural history, has raised from seed, some years ago, a new variety of currants, to which he has given the name of "*Groseillier fertile de Pálnau*"—Pálnau being the name of his garden in which this variety has been raised.

This currant tree, having been introduced into the garden of Mr. ANDRÉ LEROY, has been there rapidly propagated, with a success proportioned to its merits, and it can now be distributed in great quantities to agriculturists. This "Fertile Currant of Pálnau," was raised from the natural seed of the common currant. The distinguishing type of it is its early flowering, and in particular, the enormous abundance of its clusters. The disposition of its branches is also different; they are generally less spreading, and much larger than the ordinary currant. The leaves are slightly whitish, with deep lobes obtusely indented. The petioles are hairy at the base. The fruit is red, and, as in all currants, slightly acid—but less so than the common species; its perfume and flavor render it very agreeable as a dessert fruit. For jellies, syrups, and preserves, it yields to none of the most esteemed varieties. It has the advantage of keeping well on the bush until the first frosts of the season, without its being necessary to cover it.

I will now give you a description of a branch taken from one of a number of specimens of this currant, in the garden of Dr. BRETONNEAU, which will, much better than anything I can say, give an exact idea of the fertility and product of this valuable acquisition.

The currants occupy on the branch, a length of sixteen inches. They hang vertically,

and very close, so as to cover the stem entirely. Notwithstanding their growing so closely, they nevertheless, are perfectly developed. Each of the bunches, and there were one hundred and fifty of them, being three inches in length, carrying ten to fifteen berries, so that taking twelve for each as an average, gives one thousand eight hundred berries. These berries were about one inch and a quarter in circumference; a few of them only, which were placed towards the end of the bunches, not being more than an inch. They are certainly not so large as the cherry currant, but they are much larger than the common kind. The total weight of these currants was a pound and a half. The bush that bore this branch, although a young one, had at least a dozen branches equally loaded with fruit, and some others which were also well covered, although not to the same extent.

You can judge by this of the abundance of the crop, and how great the advantage would be to adopt this variety in gardens, instead of the common sort. I am certain that I do not over estimate the produce, at ten times greater than the ordinary kind.

These currant trees are pruned in the vase or goblet shape, upon which a certain quantity of permanent, or "mother" branches are left, at equal distances. Upon these permanent branches, secondary ones are thrown out, the increase of which is encouraged by pinching off the ends of those first produced, so as to have the secondary branches at distances of three or four inches apart on the permanent stem. These secondary branches are all stopped at the length of one and a half or two inches. From the base of these last named, other branches will grow out, which are treated in the same manner. At the intersection of all these ramifications, a considerable quantity of buds will be formed, which will not fail to flower, and to produce immense quantities of fruit. Each one of the small branches is only preserved three years, after which they are cut back to the place from whence they started. This process, at once simple as it is natural, adds still more to the natural fertility of this variety.

I regret that the distance that separates us, does not permit me to send you one of these branches loaded with fruit. I should have been very happy to let you see all the extraordinary merits of this remarkable species.

Wishing, nevertheless, to give you an idea of it, I send to the Pomological Congress at Philadelphia, a drawing of one of these branches, which I have had painted. I have also added drawings of some other different new fruits, that I wish to make known in America.

BAPTISTE DESPORTES.

Angers, France, July 13, 1852.

THE RESULTS OF MANURE ON A PEAR TREE.—In a late number of Moore's New-Yorker, Linus Cone, of Oakland Co., Michigan, informs us of an interesting experiment with high manuring. Twenty-five years ago, he planted a Summer Bonchretien pear tree, the culture of which, after a few years, was neglected. The fruit at first was fine, specimens often weighing nearly a pound each, but afterwards grew gradually smaller, till nearly worthless. The tree was then well pruned, washed with lye, and the ground well spaded, with no improvement. Last spring twenty bushels of manure from a blacksmith shop, consisting of dung, parings of hoofs, cinders, &c., was spread and dug in. Twenty bushels of fine, high flavored fruit, was the result, the same season.

Tributes to the Memory of Mr. Downing.

ODE ON THE DEATH OF A. J. DOWNING.

BY A LADY OF MARYLAND.

MOURN, all ye mountain rills, whose crystal flow
By pebbly margins, soothes the summer gale!
Mourn all ye hills,
Where cedars wave and tall pines darkly throw,
From the grey rocks, their shadows down the vale.
And all ye gardens, where the cultured flowers
Of various climes perfume the vernal air,
Mourn ye! Mourn all ye gentle showers!
Ye evening dews
Drop diamond tears in morning's early hours,
Sparkling profuse,
From lids yet heavy with the damps of night.

His step, which gave delight
To the carved walk and tasteful lawn, no more
Treads the crispest, gravel'd shore,
Bord'ring the grassy sward, with easy slope.
The eye, the hand, the pen, are silent all!
TASTE mourns the graceful spirit that portray'd
Her lines of beauty in each varied shade,
Each slope and fall,
Each "long-withdrawing vale"
And ivied wall,
Where wild birds build and tell the am'rous tale.
Ye drooping elms, and cedars dark, which sweep
With pendant boughs the grassy verdure, deep,
Do ye not hear *Her* weep?

DOWNING! Fair nature was to thee
A glorious Deity:
Something akin to Godliness, and Love,
And Art:—to build her altars 'neath the skies,
A Nymph of Paradise.

O tuneful streams and lawns of velvet green,
With clust'ring shrubs and bow'ring vines between;
Dark tow'ring firs, and Lebanon's own tree,
As once o'er sacred hills, droop solemnly!
The name of **DOWNING** whisper as ye wave;
And O ye winds! Blow lightly o'er his grave!

Each cut and stately hall, each tiny bower,
And each fair girl who loves to rear a flower;
Each soul who seeks in Nature or in Art,
To bear an humble or a lofty part,
Put on the Cypress! Shroud in mourning weeds
The casements dark, for Rural Beauty bleeds!
And ye neglected shades—our forest wealth,
No longer wearing glorious hues by stealth,
Come boldly forth!—assert your noblest powers!
Give us your stately forms—your brilliant flowers,
But while you shade America's young homes,
When brilliant autumn paints each fading leaf,
Give to the rustling wind as forth it roams,
A soft funeral tone of tender grief.

ARTIST AND SCHOLAR! Thou art fallen asleep,
In thy fair prime,
Where the blue waters of the Hudson sweep.
Alas! no opening bud or swelling fruit can charm:
Nor votive rhyme
Light the cold eye, the silent pulses warm.
We mingle tear with tear
With mourning friends around thy early bier,
And lay thy favorite rose upon thy breast.
Sweet be thy rest!
And may that world where trees immortal grow,
Around thy spirit throw
Their soft refreshing shades, amidst the blest!
Weverton, Maryland, Aug. 17.

J. C. W.

Massachusetts Hort. Society.

At a meeting of the Massachusetts Horticultural Society, held Saturday, Aug. 7, 1852, the following preamble and resolutions reported by a committee chosen at a previous meeting, were unanimously passed, and placed on the records of the Society:

The Massachusetts Horticultural Society have been startled and pained by the intelligence of the sudden death of their co-laborer and friend, A. J. DOWNING, of Newburgh, N. Y.—a passenger in the ill-fated steamer *Henry Clay*.

Eminent alike as a Horticulturist, a Landscape Gardener, and an Architect, Mr. DOWNING has, in each character, made his mark upon the age. Where the grateful gardener plucks the rich fruit from the laden bough, there is his name known. Where taste has turned the unsightly pasture into a lovely lawn, and adorned it with gems of the garden and the green wood, there are his labors felt.

The humble cot he has made a picture of beauty, and the elegant mansion, reared by his genius, fills and satisfies the most nicely critical eye.

But he has gone! In a moment, as it were, and without warning, he has been called to pass the gloomy vale of death, and now rests—

"Where rivers of pleasure flow over bright plains
And the noon-tide of glory eternally reigns."

In view of this unexpected and terrible stroke, by which this Society is deprived of one of its members, and the cause of Horticulture of an eminent and earnest advocate,

Your committee respectfully submit the following Resolves:

Resolved, That the members of the Massachusetts Horticultural Society greatly deplore the loss of their associate, who has done so much to advance and extend a taste for the kindred arts of Agriculture, Horticulture, Landscape Gardening, and Architecture.

Resolved, That in the death of the late Mr. DOWNING, Horticulture and Pomological Science

have sustained a severe loss; distinguished alike for his private worth and public usefulness, and devoted to the pursuits of Horticulture, Landscape Gardening, and all that pertains to the advancement of our Rural Homes, his memory will be cherished, and his decease sincerely lamented.

Resolved, That we tender the sympathies of the Society to the family, in their afflicting bereavement, and that the Corresponding Secretary be directed to communicate the above resolutions to his bereaved family.

Further Resolved, That the Hon. Marshall P. Wilder be solicited to deliver an Eulogy on the Life and Character of the late A. J. DOWNING, Esq., at such time and place as the Society may hereafter designate. For the Committee.

SAM'L WALKER, Chairman.

Pennsylvania Horticultural Society.

At the meeting of this society, August 17, the following appropriate resolutions were unanimously adopted:

Resolved, That we, deeply deplore the afflictive providence which involved, in the destruction of the Henry Clay and the tragical loss of many valuable lives, the removal of our esteemed fellow member, A. J. DOWNING, of Newburgh, in the pride of manhood, and in the full maturity of his powers, from the scene of his useful and honorable exertions, at a time when his services were so universally and highly appreciated, and when his efforts in life were producing throughout the land, the beneficent and beautiful results for which he had so long labored, and over which his benevolent spirit would have so generously rejoiced.

Resolved, That we regard as a national bereavement and affliction, the loss of one whose powers were so diligently and successfully dedicated to the purest and best interests of his race and his country; that the deceased was endowed by nature with a vigorous intellect, which was elevated by liberal and practical cultivation, and directed by an expanded philanthropy and a glowing love of nature, to the promotion of those pursuits connected with rural life and rural happiness, which, while they contribute to the solid power and prosperity of a people, refine and elevate their tastes and enjoyments; that the country will hold in grateful and enduring remembrance his valuable and popular contributions to the literature of horticulture—his aid in the promotion of Landscape Gardening—in the improvement of the "Fruit and Fruit trees of America," and of Cottage Residences, and his able and assiduous labors for the general advancement of Pomology and rural economy; that his efforts in these branches have produced an improvement which is perceptible in the aspect of many sections of our country; and that his sudden and melancholy death is a bereavement which will be long and deeply deplored, far beyond the affectionate and afflicted circle of which he was the ornament and the pride.

Resolved, That as the loss of A. J. DOWNING is a national calamity, calling for an appropriate national commemoration, we cordially approve of the action of the President of the American Pomological Congress, in inviting the Hon. Marshall P. Wilder, an intimate friend of the deceased, to deliver at the approaching session of the Congress in Philadelphia, on the 18th proximo, an Eulogy on the life, character, and virtues of our lamented fellow member.

Resolved, That we sincerely condole with his bereaved family upon this afflictive dispensation of an inscrutable Providence; and that as a manifestation of our respect and sympathy, the Secretary be directed to transmit to them a copy of the foregoing resolutions. T. P. JAMES, Rec. Sec'y.

New-York Hort. Society.

At a regular meeting of the New-York Horticultural Society, held at Stuyvesant Institute, August 2, 1852, after some appropriate remarks by Mr. PETER B. MEAD, on Mr. DOWNING's melancholy fate, a committee appointed for that purpose reported the following Preamble and Resolutions, which were unanimously adopted:

Whereas, This Society, by a melancholy casualty, has been suddenly deprived of a valuable and esteemed member;

And whereas, It becomes our duty to pay a proper tribute to the memory of one whose services in the cause of Horticulture have given him a lasting claim to our gratitude;

Be it therefore Resolved, That in the sudden death of our late associate, A. J. DOWNING, Esq., we recognize the hand of an overruling Providence, and that we deeply deplore the loss sustained by his family, by his calamitous death, and hereby tender our sympathies to them in their affliction.

Be it further Resolved, That, in common with all who take pleasure in horticultural pursuits, we feel that we have sustained no common loss in the death of one so eminent in his profession, and whose labors in Rural Architecture and Landscape Gardening, will remain as enduring monuments of his judgment and taste.

On motion, it was

Resolved, That the Corresponding Secretary be requested to forward these Resolutions to Mrs. Downing, and also furnish copies of the same for publication in the Horticultural Magazines.

Pittsburgh Hort. Society.

Pittsburgh, Aug. 7, 1852.

L. TUCKER, Esq.—Below is a copy of resolutions passed by the Board of Managers of the Pittsburgh Horticultural Society, at their regular monthly meeting on the 4th instant. A. B. McQUEWAN, Cor. Secretary.

Resolved, That this Board has heard with profound regret, of the melancholy death of A. J. DOWNING, Esq., by the burning of the steamer Henry Clay—That we regard his death as a National loss to the cause of Horticulture,

Landscape Gardening, and other Rural Sciences, not soon, we fear, to be filled up—his life and brilliant talents having been devoted to the advancement of his favorite pursuits.

Resolved, That this resolution be published in our daily papers, and a copy of the same be sent to the Editor of the Horticulturist by our Corresponding Secretary.

W. H. WILLIAMS, Pres. Protem.
J. M. KAIN, Sec'y.

Genesee Valley Hort. Society.

At a special meeting of the Horticultural Society of the Valley of the Genesee, held in the city of Rochester, August 12, 1852, the President, on calling the meeting to order, stated that he had called the members together at the suggestion of others, and in accordance with his own feelings, to express in some suitable manner the feelings of the members in regard to the sudden and melancholy death of A. J. DOWNING, who had been for many years an honorary member of this Society.

On motion of M. G. Warner, a committee of five were appointed to prepare resolutions for the consideration of the meeting.

The President appointed M. G. Warner, Jas. H. Watts, H. E. Hooker, Geo. Ellwanger and A. Frost.

The Committee, through their Chairman, reported the following Preamble and Resolutions—which are unanimously adopted:

Whereas, in the death of A. J. DOWNING, American Horticulture has lost its noble and gifted standard bearer, and society one of its most amiable, accomplished and useful members—who has done more than any other to awaken among the American people an appreciation of their country's resources, and to cultivate and diffuse a love for the beautiful in nature and art—whose writings, brilliant and powerful in style, and truly American in sentiment, have given us a Horticultural Literature which commands the admiration of the world,—therefore,

Resolved, That we regard his loss as one of the greatest that could in this day befall the American people in the death of any one man—that we deeply sympathize with his afflicted friends and relatives, truly "mourning with those who mourn" for the loved and lost.

Resolved, That though Mr. DOWNING is no more, and his voice is hushed in death, yet he still speaketh—his works will live after him, and his influence be felt while correct taste has a disciple or a home in the earth.

Resolved, That we recommend the Horticultural Societies of this country to take some some united action, to testify in a suitable manner their regard for the memory of Mr. DOWNING; and that a committee of three be appointed to correspond with other Societies on the subject.

P. Barry, L. Wetherell and James H. Watts,

were appointed a committee in accordance with the resolution.

Resolved, That the proceedings of this meeting be furnished the various Horticultural papers, with a request to publish the same, and a copy thereof be forwarded by the President of the Society to the family of the deceased.

JAMES VICK, Jr., Sec. P. BARRY, Pres.

Columbus (Ohio) Hort. Society.

Whereas, news has been received of the loss of the steamer Henry Clay, by fire, on the Hudson, and among the lost we find the name of A. J. DOWNING, of Newburgh, the editor of the Horticulturist; therefore, be it

Resolved, That while we deplore the loss of so many lives, and sympathize with those bereaved, we learn with feelings of sincere regret and profound grief, of the death of the distinguished horticulturist, A. J. DOWNING. That while horticulture engages the attention, and enlists the feelings of many, none have surpassed the deceased in intelligence, enthusiasm, industry and devotion, in all things that relate to "rural art and rural taste," none have left more enduring or more beautiful monuments of their labors, than he. Death has surprised him in the midst of his usefulness and success, and just as his cultivated taste was being fully appreciated by the nation. Who can fill his place?

Resolved, That as an honorary member of our Society, we feel that we have a lost a brother, whose writings and teachings have been our pleasure and our guide, and whose memory we will cherish as one worthy our love and esteem.

Resolved, That in this bereavement, we sympathize with his family, and the friends of horticulture everywhere, and as a token of our esteem, we will place these resolves on our minutes, and forward them to be published in the journal which he so ably edited.

[From the N. Y. Tribune.]

Among the victims by the destruction of the Henry Clay, there is none whom the country could so little afford to lose, or whose services to the community could so little be replaced, as Mr. DOWNING of Newburgh. A man of genius and of high culture, thoroughly disciplined in his profession by long study and observation in Europe, with taste refined and judgment true enough to feel the deficiencies and to know the needs of our domestic, and especially of our rural architecture; still in the prime of life, and exercising a wide influence by his practical labors as well as by his life, he is snatched from a sphere of high and beautiful utility, and a successor we cannot hope to find. What Mr. DOWNING had done and was doing to improve the fashion of our dwellings, hardly surpassed in value his contributions, theoretical and practical, to the kindred art of landscape gardening. Under his directing hands, the grounds at the Smithsonian Institute at Washington, were being transformed into models of beauty in their kind, and the grounds about many private

mansions also bear testimony to the same taste, the same wise sense of beauty and fitness. As a writer, Mr. Downing is remarkable for a mixture of the strong sense, thorough understanding of his subject, and a genial originality. The cessation of his monthly essays in the *Horticulturist*, will leave a permanent blank in the history of the domestic arts. While he drew his materials from the most varied culture, he was always, and in the most frank and manly way, an American. His chief aim was to refine the taste, and elevate the social life and habits of his countrymen, to something like the ideal proper to freemen. An artist, a scholar, and a gentleman, we deplore his untimely loss, and a wide circle of acquaintances who with us recall his eminent social, as well as public qualities, will join with us in this tribute to his memory.

[From the *New York Evening Post*]

Mr. Downing first became known by a work on *Landscape Gardening*, in which he exhibited great taste and enthusiasm. It was nearly the first book of any pretension to direct our countrymen to ornamental gardening and rural architecture, and it had a good effect in refining and cultivating the public taste. Not long afterwards he published a smaller work on *Cottage Residences*, which also attained a wide circulation, and exercised a healthful influence. He then prepared a work on the *Fruits and Fruit Trees of America*, in which his extensive horticultural studies and experience were applied. He edited also, a small book entitled *Hints on Architecture*, but of late years his energies were principally exerted in the *Horticulturist*, a monthly magazine of high character, devoted to *Horticulture*, *Pomology*, *Landscape Gardening*, *Botany*, and *Rural Economy*. Mr. Downing's contributions were a chief attraction of this periodical, which through his efforts, had become unusually successful.

These publications of Mr. Downing, more than any other agency, had worked a change in our style of building, and created a general improvement in taste. He was commissioned, by a large number of gentlemen about to construct private residences, to prepare the designs and lay out the grounds. The evidence of his fine professional accomplishments now meet us in all parts of the country, and his loss is one that will be felt far beyond the bereaved circle of which he was the ornament and pride.

At the time of his death, Mr. Downing was employed by the government at Washington in laying out the public grounds in front of the Capitol. He had not yet completed his plans, but such alterations as had been already made were universally admitted to be a great improvement to the metropolis, and promised the most beautiful results. Mr. Downing had determined to expend the whole resources of his art,

under the guidance of his exquisite taste, in rendering these national gardens worthy of their name. Whether he has left any instructions or drawings, to enable others to carry out his designs, we cannot say.

[From the *Newburgh Gazette*.]

We have had a conversation with Miss Amelia A. Bailey, in relation to the last moments of Mr. Downing. She assigns the preservation of her life to the advice given her by Mr. D., who, before she jumped overboard, urged upon her presence of mind, and directed her how to avoid strangulation as she sank into the watery element. They were on the stern of the boat together, whence one after another were throwing themselves into the water as the fierce flames approached. She sprang into the water from an elevated point, and as she arose caught hold of the chain, fortunately within reach. There she sustained herself until a gentleman, arising for a moment from the same fearful grave of youth, manhood, and age, grasped the chain with a convulsive effort, that forced her to lose her hold. Miss B. finally clung to the braces (under the guards,) sustaining above the water with her feet, an elderly lady in whom the spark of life had almost expired, while another person clung to her waist until a boat arrived and rescued them. Miss B. informs us that the last she saw of Mr. Downing, he was struggling in the water with Mrs. Wadsworth clinging to his neck. She did not speak to him in the water, though she saw him, as stated above, sinking in the water a short distance from her. She says he was perfectly composed, and just before they parted on the deck, replied to her inquiry whether there was a prospect of being saved; 'I cannot say, there is danger,' or something to the same effect.

☞ A correspondent of the N. Y. Times writing from Newburgh, in reference to the disaster to the *Henry Clay*, says:

"This country has good cause to assail them, and pray most sincerely that just retribution may fall upon all who were in any way the cause of this thrilling and heart sickening calamity. Mr. Downing's loss cannot be made good by a thousand owners of steamboats. His death is a national loss. Mrs. De Wint, of Fishkill, was niece of the late John Quincy Adams, and Mr. Downing was her son-in-law. He undoubtedly lost his life in attempting to save a lady—Mrs. Wadsworth of New-Orleans, a very lovely woman—and who was under his charge. His wife escaped by being supported upon two chairs until she was rescued. Knowing that Mr. Downing was an excellent swimmer, she supposed he had been taken off by the *Armenia*, and gone to New-York, and it was not until the next day that she was told of his sad fate."

Domestic Notices.

CALYSTEGIA PUBESCENS.—This plant, a double, climbing rose convolvulus, continuing to flower through a large portion of summer, a perennial, and perfectly hardy, had much to recommend it, and may yet be continued in cultivation by those who admire variety. But, like the *Campanula trachelium*, introduced for ornament, it is likely to prove a very troublesome weed. We last year planted two or three fragments of the root of the *Calystegia*, an inch long, and as large as goose quills, which grew, and produced a profusion of flowers. But this spring we found them coming up over the whole surface within a circle of ten feet, whither, like the Canada thistle, their roots had extended. They were destroyed with the hoe; but in a short time they sprang up again, nearly covering the whole surface, with some extension of the circle. The soil is light; and they may not extend quite so rapidly in heavy soil.

THE MILAM APPLE.—This apple has obtained some celebrity at the west, and has been widely, though not abundantly cultivated. Its quality as given in the following extract from a letter of Dr. KENNICOTT, of Northern Illinois, agrees with specimens we have received from Cincinnati. "Perhaps I did not name a celebrated Indiana and Illinois apple, called 'MILAM'—my brother and several neighbors have many trees of this common western variety—we have only one, and do not propagate it. This apple is barely 'good,' and is no great bearer here, whatever it may be elsewhere. I know a dozen trees 20 years old, which do not produce as much as one tree of the size ought to bear. And then we have certainly two, and perhaps more varieties under this name. All that can be said in favor of the Milam is that it is *not* a bad apple—is pretty, though small,—pleasant, but rather insipid—and where it produces well, as it is said to do at the south, and no better can be had, it should be cultivated."

APRICOTS AT THE EAST—CLIMATE OF PALESTINE.—Extract from a letter of Dr. J. THOMAS, dated Smyrna, June 17, 1852—"When I was at Cairo on the 6th of May, they had on the

table at the hotel, ripe *apricots*; and we have found them at almost every important town that we have stopped at since. We found very fine ones in Palestine, but not finer, perhaps not so fine, as I have seen in western New-York." The letter adds, "The climate on the hills of Palestine seemed to me more delightful than anything I have ever experienced. — is quite American in his prejudices, but he said he had never breathed any air so pure, sweet, and exhilarating as that of the hills and valleys around Jerusalem. His health is so much improved that his friends would hardly know him."

CUCUMBERS.—We have often seen cucumbers in England, that measured twenty-three or four inches, and the flower on them, which is a *sine qua non* for exhibition with English amateurs. There are "Cucumber Societies" around London, the special object being the early production of this fruit. But recent improvements in the heating of forcing houses in that country, renders it easy to have them in plenty all through the winter, in every place where attention is given to a hot-house, and consequently the societies are now only the remains of times gone by, when the fight for a good cucumber in April, was winter's frost on one side, against plenty of good stable manure and careful gardening on the other. Market gardeners around London, grow cucumbers early in the year, on an extensive scale, in frames of many hundred feet in length, heated by hot water pipes running through them, upon which some faggots of wood are first laid, and the compost upon the latter. The faggots serve to distribute the heat equally beneath the soil in which the plants grow, and thus yards and yards of frames are heated by a pipe 3 or 4 inches in diameter, through which one small boiler and a moderate fire keeps up a circulation of the hot water.

A MONUMENT TO MR. DOWNING.—I have thought it would be fitting, could a suitable space of ground be had near where he has passed so many of his useful hours, midst his family and his garden, looking down upon the noble Hudson,

the river of his choice, in which might be planted the native trees of our country, and the ornamental ones of others—such as the numerous nurserymen, and all his admirers, would be glad to appropriate for the purpose, to be gathered from all localities possible—there to be planted around such enclosure, and about the resting place of one so admired when living, so lamented when dead. It would mark the spot of him who loved the soil—its cultivation—and its embellishment, and whose example all would like to imitate.

Such a plan carried out, to be superintended by judicious and qualified friends, would be in harmony with the character of him whose memory we would perpetuate. J. H. WATTS.
Rochester, August 12, 1852.

ROSES.—Dear Sir: What is the proper time of year to propagate roses by cuttings, for pot growth. I have this year bought some of the best sorts I could find, and they are now planted out in my garden, and growing luxuriantly. When should they be potted again to bloom in the green-house next spring? and ought they to be cut or pruned. Yours, J. T.

[If you take off cuttings the last week in August, and plant them in light soil, under a north wall or fence, they will root and make nice little plants before winter. The end of October will be time enough to take up your Roses. Do not cut them when you pot them; but let them stand until the beginning of the year, when you may cut them back moderately, and bring them forward for bloom.] Ed.

RAVAGES OF THE CURCULIO PREVENTED.—The accompanying box will show evidence for itself, that I have for the second year, found means of arresting the fearful progress of the Curculio, which is by syringing the trees after the fall of the blossom, with a mixture of white-wash and flour of sulphur, in the proportion of 18 double handfuls of sulphur to a barrel of tolerably thick white-wash, made of unslaked lime. The sediment of this mixture will answer for a second and third barrel, merely filled with water, and well stirred.

I applied the above three times a week for four weeks, and have met with great success, having been obliged to prop the limbs to sustain the weight of the fruit.

These trees are ten years old, and have blossomed every spring, but have never until last year, ripened any fruit.

The specimens I send you are Bolmar's Washington, and you will observe upon some of them, the marks of that little infamous Turk, which are nicely healed over, leaving the crescent to light up those who may have doubts that they are the production of a Curculio district. Syringe well, and although the fruit may be stung, it will come to perfection.

I am glad to find that Mr. STOKES has also been successful in raising this most delicious fruit, and his idea of coloring the whitewash is a good one, as it does away with the glaring effect given by the lime.

I have doubts of the practicability of using a rose upon the tin garden pump, as it will soon stop up with particles of lime, and become useless. I prefer the lip which generally comes with these pumps. This may be bent in such a manner as to flatten the stream as it passes out the spout, and thus disperse it over the tree. I did not notice that any of the fruit withered or turned yellow, as spoken of by Mr. STOKES—of course there were some, as is the case in the best plum districts, that decayed and fell from the trees, making room for those that are left to have a chance to swell. THOS. W. LUDLOW, JR. *Yonkers, Westchester Co, N. Y.*

NOTE TO THE ARTICLE ON EVERGREENS, JUNE No.—Arbor Vitæ, to give the very finest effect, and make a thick, impervious mass of verdure, should have their lower branches growing out from very near the roots; and these trailing branches should be partially buried in the earth, when they will strike down new roots, and throw up shoots; each branch thus buried, forming as it were, a separate tree.

If there are no branches trailing on the ground, those nearest the earth may be bent down and pinned into the earth with stout forked sticks, where they will soon root, if kept mulched and moist. No trimming or cutting in can make the tree so thick and impervious as this method, or give it so fine a pyramidal form. A seedling Arbor Vitæ, comparatively new, called the Warrenia, is much stouter in its habit, and thicker in its growth, owing to its much shorter joints than our native tree, some fine large plants of which we have receiv-

ed from JOHN J. STIMSON, Esq., a distinguished amateur of horticulture in Providence, R. I.

The true method of setting hemlocks to have them form a thick impenetrable mass of beautiful foliage, is to plant them in clumps, or hills, with three to five plants in a hill, each plant from a half foot to a foot and a half apart. Set in this way, each tree throws its branches outward to the light and air, and thus makes a very dense thicket of green. We were indebted for this hint to IRA CLEVELAND, Esq., a lawyer of Dedham, and Secretary of the Norfolk Insurance Company; a gentleman of great taste in architecture and landscape gardening, who will show any one interested, some of the finest specimens of hemlocks grown in this way, eye ever beheld, fully equal in beauty to any exotic evergreen known. Heading in the tree nearly down to the roots, will give much the same growth and effect, though the former method is much preferable.

The American Yew may be trained so as to make a low hedge, or a single oval, or pyramidal, of the most rare and ivied tint of green, which is rendered still more striking, late in the season, by the contrast of its brilliant scarlet berries.

The mulching we employ for evergreens, viz: fine hub chips, spent tan, or common chips, and chip dust—forms the very best manure that evergreens can have. JAMES RICHARDSON, JR.

STRAWBERRY CULTURE IN THE VICINITY AND IN ROCHESTER, N. Y.—Very much attention has been given by fruit growers in this vicinity to the culture of the fine fruit, the *Strawberry*, and our markets are abundantly supplied with the best kinds. A careful comparison of select varieties for *flavor and productiveness*, has resulted in the highest commendation of "Burr's New Pine," as the best berry grown. I subjoin a statement made by G. D. SOUTHWORTH, of Penfield, who took the first premium from the "Genesee Valley Horticultural Society" this season. His soil is a light sandy one, which he says he prefers for one particular reason, that the frost does not throw them out of the ground in early spring, causing destruction to the roots. He plants them in rows.

As this is his first experience, he is to discard the Alpine variety, which has grown well, but

is not fit for market. He proposes planting out half an acre of "Burr's New Pine" more than he now has, and ultimately as many as he can attend to.

To use his own words, he says the "*Burr's New Pine*" will produce double the quantity that the "*Hovey's Seedling*" will, carries to market well, and is all that could be desired.* He places straw under the vines, and when his fruit is brought to market, it is as clean and bright as though varnished.

His success has been complete—price sold for, from 25 cents per quart, down to 12½ cents, averaging for his crop, 18 cents. J. H. WATTS. Rochester, July 16, 1852.

Geo. D. Southworth's statement.—I have about five-eighths of an acre planted to strawberries. The varieties are—Early Scarlet, about three-eighths of an acre; Hovey's Seedling and Burr's New Pine, about one rod each; Alpine the remainder.

I have sold a little over 2,000 quarts, at an average of 18 cents a quart. \$265. G. D. SOUTHWORTH. Penfield, N. Y., July 15, 1852.

DR. VALK'S SEEDLING GRAPE.—The August number of the Horticulturist, contains a "reply" to what is termed my "strictures." On what? Very much to my surprise, and certainly to my regret, the few remarks made by me in the June number, in relation to my Seedling Grape, and Mr. CHORLTON's comments thereon, appear to have given that gentleman a deal of offence. "A corner in your valuable journal is requested to answer my *caustic* remarks," and if I am to judge the measure of their causticity by the pungency of the "reply," they must have been pretty highly seasoned with "invective, braggadocio, and sarcastic pique against a trifling misplaced etiquette."

Now all this puts me in mind of an old saying, that a tempest is easily raised in a teapot. Referring to pages 290 and 291 of Hort. for June, your readers will please note the article that has proved so exciting to Mr. CHORLTON. I had communicated to the late deeply lamented editor, the fact of my having raised several seedling grapes, a cross between the Black

* Burr's New Pine is an American Strawberry of first rate character—our correspondent does not overrate it. Very fine, very productive, very early. Ea.

Hamburgh and the Isabella, and had sent him a bunch of the fruit. His judgment was flattering, and I think would have been more so, if I had been able to send him a perfect bunch.

Mr. CHORLTON notices my communication in the Hort. for November, and thought that "too much praise" could not be given to me for my "enterprising experiment," but he thought I had "gone the wrong way to work." My reply was, that "physiological theory teaches" well, but practical experience better,—the proof of hardiness in my grape being the past severe winter. I spoke of my seedlings as I thought they deserved, although I had "gone the wrong way to work." Without a thought of, or reference to Mr. CHORLTON, I felt the necessity of stating my abhorrence of humbugs and cheats, and left "my grape to the ordeal of its own merits, and the test of time." In all this, where are the "caustic remarks," the "invective, braggadocio, and sarcastic pique" with which I am charged? It is a libel on the truth to say so, and still a greater libel to misunderstand and then misrepresent what I have said. It is a perfect piece of folly to write about "good feeling," when "comments" are made of a character directly contradictory of the assertion. *Where*, in my "estimation," do I assert, that "acting in accordance with the inscrutable and immutable laws of the all wise designer of the universe," would be "catering a la Barnum?" It is something worse than a "delusion" to insinuate the charge; it is a positive untruth to assert it. No man more thoroughly detests the "follies and cheats" of horticulture than I do, and it was because of this, that I desired to "establish the reputation of my grape on some better evidence than the usual form of horticultural charlatanism." I wished to put my grape to the proof, and *when proved*, then to claim my just due for doing something to improve a valuable and delicious fruit. Those "who know" are welcome to indulge in the largest scepticism "upon the experiment." It is an indulgence that will injure no one, but when it comes to "comment" and misrepresentations, the pure offspring of a perverse imagination, I object decidedly, and would remind the gentleman to whom I am alluding, that bearing false witness against his

neighbor, is in violation of a command of the decalogue.

It has been hitherto thought a "desideratum" to procure a native grape as *hardy* as the Isabella, yet bearing fruit equal to the foreign varieties. But this is *not* the desideratum after all. It is a very desirable point to be sure, yet it is a "*trifling matter*" compared with the "constitutional power to resist mildew during the growing season." So says Mr. CHORLTON, therefore the desideratum is, a *constitutional power to resist mildew during the growing season*. The foreign grapevine is *hardy* enough, and stands unprotected without injury in situations north of this, (Staten Island,) but we want the constitutional power, &c., and must get it as soon as we can.

My assertions, whether few or many, have amounted to the declaration of the fact, that my vines are as hardy as the Isabella, and, that I hold them to be superior to every other grape grown in the *open air* in any part of the United States. I shall endeavor to *prove* my assertions by the test of time, and shall cheerfully await the verdict.

Having no vines to *sell*, and not intending to dispose of a single plant until that verdict is rendered, I can excuse the doubts, surmises, and scepticism of Mr. CHORLTON, "and these who know." To the just and impartial reader, I leave the decision of the question—is my communication of May 5th, in June Hort., or Mr. CHORLTON's of July 15th, in August Hort., the most open to censure, for their "caustic remarks," and "sarcastic pique." "Jeffreys" has got *something* to say, and I am anxious to hear him say it. W. W. VALK, M. D. *Flushing, L. I., Aug. 10, 1852.*

COLD WATER IN WELLS DURING SUMMER.—In the March number of the Cultivator for 1851, (page 117,) I described the well from which we draw our daily supplies of water. It is protected by trees and buildings so that the sun never shines into it; but the snow enters, and during all the spring, and early part of summer, it is so uncommonly cold as to have been mistaken by a guest, for ice-water. Gradually however, it grows warmer as the heat of the season increases, and as the springs that feed it, mingle with its chilled waters; but we have

often thought how desirable it would be if its coldness could continue throughout the summer and autumn.

Well, we have lately found the remedy for this defect. Judge R — dining with us on the 8d of last month, brought in his carriage a large lump of ice, intended for other purposes but which we plunged into the well. For about two days, the water was gradually growing colder, and then it was all *iced water*, delightfully cold, and far more pleasant, in my estimation, than any water from a pitcher of ice. It continued so about a fortnight. If no rains had swelled the springs that flow into the well, this temperature would have continued longer.

Ten or twelve pounds of ice every fortnight would not be deemed a high tax; and may be compared with the expense of a quid, a puff of smoke, or a pinch of snuff *ad libitum*. D. T.

LILIUM LANCEFOLIUM.—This is the season when these superb flowers are blooming. Let us counsel all who have either of the varieties, to save seed, and to hybridise them with some of our native species. Some growers have done this, but we are not aware that any great result has hitherto arisen. It is perhaps rather soon to expect it, for it takes three years at least to flower a seedling from the time of sowing; and therefore much may be in store for us yet, of those now in process of growth; and besides, judging by analogy from the hybrids of other flowers, we must not expect to get distinct and fine new sorts without continued application. No trouble however, or time either, can be thrown away in this matter, for if strikingly new varieties are not produced, all the seedlings will be beautiful; and it will be a long time yet before the stock of these splendid ornaments of our green-houses and gardens at all approaches what we should like to see. There is a fine lot of these seedlings coming into bloom at Mr. BOLL's nursery, at New-York. We heartily wish him success. We do not generally see these Lilies grown so well as they ought to be. We have grown *L. lancefolium punctatum*, ten feet high, with from 10 to 16 flowers as well as the stem and leaves of a size proportionately large to that height. This variety is always both earlier and taller than *Rubrum*, or *Album*, and when duly encouraged in its growth forms a much more ma-

jestic plant; although in beauty it must yield to the first of them. Black peat earth is by no means essential to this plant, as many suppose; good loam, well enriched, it delights in.

THE MICROPHYLLA ROSE.—The *Microphylla* Rose, according to Loudon, was introduced into Britain, from the East Indies, in 1823. Its *specific character* is, "Leaflets, finely serrate, shining. Calyx muricated with very dense prickles. Sepals, short, broad, acute, apiculate." In 1829, he mentioned no *variety* of this *species*; but I have seen the names of *nine* in a recent catalogue. I have only the *white*, and the *red*,—the latter agreeing best with the *specific character*, and would do so entirely were its leaves "shining" when dry. The *white variety*, I think must be a hybrid, as its leaves are larger, its calyx less muricated, and its sepals longer and more slender.

The red sort is a beauty, perfectly double, and blooms throughout the growing season, though it is rare to find more than two or three roses open on the same bush at one time. The flower bud resembles a bur, and hence it has been called the *Bur Rose*.

Both varieties, however, are very desirable, though they are unable to withstand our rigorous winters; and as the flowering twigs stand on the stems of last year's growth, it is necessary to bend them down and cover them on the approach of severe weather.

The Champney, Feilenberg, Chromatella, and other tender sorts, when the stems are killed by the cold, send up radical shoots which bloom earlier or later in summer, and thus assume the habits of herbaceous perennials. D. T.

MONEY FOUND IN PEAT EARTH.—A gentleman was not long since breaking up some peat earth, which he had procured for gardening purposes at Wimbledon, a few miles from London, when his spade struck against a hard substance, which turned out to be a silver half crown piece of King Charles the first. It was about three inches deep in the turf, and assists in forming some estimate of the time which elapses in the reduction of vegetable matter to the state which we term peat. For the coin was so firmly fixed, and the surrounding vegetable matter was so perfectly even in texture both above and below it, that no reasonable doubt

can exist that the depth of soil above it had been gradually formed over it, after it had been dropped there, probably by some Cavalier or Roundhead of the day. At all events the coin could not have been deposited there before the time of Charles, and the impression bore but little signs of wear from use; the inference to be drawn is that it had in all probability laid there from that age.

HORSE SHOE IN A TREE.—Whilst cutting a piece of oak a few weeks ago, in the timber yard of Mr. Thos. Wallis, at South Shields, England, some workmen found a horse shoe embedded in the heart of the wood. From the thickness of the wood that had grown over it, it must have been fixed to the tree when very young.

DAPHNE INDICA RUBRA.—Mr. Editor: I should like to see the *true* variety of this delightful plant more amongst us in this country. I was for several years engaged in business in England, where I got bit by the "Floriculturaphobia," which, as you know, is a prevalent complaint in that part of the world. But, upon returning home, and stocking my little greenhouse, I hunted through many nurseries here before I could get the right kind. All the nurserymen have what they call the *Indica rubra*, but it is not true; nor is it in leaf or flower, anything equal to the correct one. At last I met with it true, at Buist's, at Philadelphia. The flowers are finer, and more abundant, and the leaves at the point, lancet shape, and thick in substance, in the correct plant. In England I found it difficult to keep in health, until I was let into the secret by one of the two men who introduced it into that country; since that, I have had no trouble, and I think no plant equals it in the early spring. Yours, AMERICUS.

[Will our correspondent oblige us by sending his experiences of this flower? We agree in his admiration of it, and are sure his remarks on its cultivation would be very acceptable to many of our readers. Ed.]

A NOTE FROM A FARMER'S WIFE.—MR. DOWNING: What think you has become of the New England country girl, who used to contribute to your pages, over the name of "Wild Flower?" I suppose she is married, as few who are belles are apt to remain long in a state of "single blessedness." She says on page 546, vol. 4th,

that she is tired of hearing about "remarkable pears," and that she could not "graft a tree for her life." If she was tired of hearing of new pears in 1850, what must be the matter now, since more has been said within the last two years on the subject of fruit, than had been in ten years previous. I am no more tired of hearing about remarkable pears, than I am of eating them, and they taste so much better when you can say, "they grew on my own trees," and as for grafting, I can do that to a charm, and have done it, on seedlings of my own raising. Having been rather unfortunate at first in raising pear seedlings, I raise them on a new plan now, which makes their roots fibrous. If my trees could talk, they would report themselves by hundreds, that I have raised, grafted or budded, and helped to transplant within the last 12 years. (I hope the nurserymen won't be alarmed; there is no danger of my example being followed by the ladies sufficiently to interfere seriously with their business.) My father is a farmer, and in the days of my youth kept a small nursery himself. I used to work with him in the nursery, tying buds and the like, for many a day. This I suppose accounts for my passion for trees ever since. My love of flowers increases with years. What I know of botany is self acquired; but I have learned enough for all useful purposes. My love for wild flowers leads me over hills and dales, in search of floral treasures, to decorate my garden, and I have a large collection of native flowers that I have removed from their native haunts. I find the natives of upland to be the most patient of removal, and there is certainly nothing more delightful to me than an intelligent ramble in the woods with the double pleasure of botanical and gardening acquisition to lead me on. I always find something new in flower, even where I have wandered many times.

I do not exactly like the spirit in which "Wild Flower," speaks of the farmers' "rye bread," as if it was a matter of course that the farmer must eat rye bread. It is the farmers who raise the wheat on their own land, and "lords of the soil" are not likely to give the fat of the land wholly to others; and farmer's wives are apt to know how to make wheat bread (that is to say if they were prudent in

the choice of a wife, and married farmer's daughters.)

In your remarks on the article I have referred to, you speak of the constant turning of eyes to the cities for fashions and customs; if that was all I should not so deeply regret it; but there is not a season passes but some relative or neighbor is selling or leasing his farm, and going to some village or city to live, and as far my observation extends, it is generally chargeable to the gentlemen. I fear my husband may take the disease, which appears to be contagious, but here there would be an obstacle in the way.

I entirely agree with Wild Flower's notions that the killing of all birds should be made a crime, with attendant penalties, but I fear that legislatures would be inefficient to the task. It would be a more effectual stop if the mark of odium could be put upon the hunter [except in wild countries] by common consent, as it should upon the tobacco user in any form. Then, and not until then, will the thing be accomplished, but as long as young ladies will countenance the use of tobacco in any form by young men, just so long will they use it. A FARMER'S WIFE.

As a farmer's wife has not sent us her address, we have no other way than this of expressing our thanks and acceptance of her kind offer, which accompanied the foregoing. Ed.

! THE OSAGE ORANGE.—I know of no plant so likely to prove valuable for hedges as the Osage Orange. I have cultivated it many years; and even in this climate it is quite hardy enough for that purpose. It is true that very thrifty shoots often have their tops killed down for a foot or more in severe winters, but such branches as have ceased to grow in good season, and have had time to mature their wood, sustain no injury. And in a hedge properly trimmed, the twigs are greatly multiplied, and there are no leading shoots to be injured or killed.

The thorn forms a nursery for insects, and often perishes in consequence; but I know of none that feeds on the Osage Orange. I consider it also more formidable than the thorn; and whoever encounters it, unprotected against its spines, will be likely to remember that time.

I have a hedge-row, rather than hedge, through which none who regard a sound skin, would dare to creep. D. T.

THE BLACK ANT.—These marauders are of ten extremely troublesome in gardens where they make their nests; and from thence prowl into the larder or the fruit garden, even at considerable distances from their home. Last year, in the Cultivator, I mentioned having carried off a large detachment in a basket of apples; and I have just been reminded of it by the girl bringing me a tin can of sugar into which the ants had found their way. Taking them to a broad smooth stone, I let them out, in such numbers as I could manage, and soon destroyed about two hundred and fifty. That happened yesterday; and this morning a similar scene occurred, though only about 100 were now killed, indicating that their family was much reduced. D. T.

THE ASTRACHAN APPLE.—Every householder who owns land—if only a small lot—ought to have one tree of the Astrachan apple, both on account of its earliness, and its excellence for cooking. It is so tender as to be cooked almost as soon as it is scalded; and so pure that it has no unpleasant tang, like the Yellow Harvest. It is acid indeed, but sugar readily overpowers this defect.

It is a tree of vigorous growth, an abundant bearer, and what is worthy of note, it bears every year without fail. Twenty feet from where I now sit, stands a tree of this variety, with branches bending under their load; and a very frequent dropping takes place. When half grown, these apples may be used; but like most other fruits, the flavor increases with the magnitude. A well grown tree would furnish a common sized family for some four or five weeks, though I cannot determine this period exactly.

The fruit is of great beauty; having a bloom like the plum, on a fine red skin. I know of no apple at this season that would command more customers in market. D. T.

DURATION OF TIMBER.—Much has been said and written upon the age of trees, both living and after they have been reduced to the use of man. That under favorable conditions the vegetable fibre is well calculated to resist the ruthless ravages of time, many well authenticated evidences have been accumulated to show. The roof of Westminster Hall in London, which has of late years given rise to repeated disputations

as to whether it be of oak or chestnut, was without doubt, erected a thousand years ago, and continues perfectly sound; and there are other edifices in the old world which contain equally old timber in perfect preservation. But there has lately been imported into England, some specimens of ancient timber, which by contrast take away the dignity of age from the European ancients. During the excavations which have been so perseveringly prosecuted under the direction of Dr. LAYARD at Ninevah, some timbers of considerable size, of the wood of the Mulberry, have recently been discovered, which are said to be as solid and firm as they were when placed in the position from which they are now withdrawn. But when were these venerable ancients submitted to the axe? At least seven or eight hundred years before the christian era; and they are now some twenty five or six centuries old! We are not aware that any specimens of old timber can at all bear comparison to these, for in none of the ruins of Egypt or of India, that the researches of the many indefatigable travellers of the last hundred years has produced, was there found any wood work that, from its position and appearances, indicated an age coeval with the structures themselves.

THE CURCULIO OR PLUM WEEVIL.—Much has been written about this destructive insect, and many plans have been adopted to prevent its ravages on the Plum, and other smooth skinned fruits. Some prefer paving under the trees; others planting in hog or poultry yards; many use salt, ashes or sulphur, scattered over the ground around the trees.

The first method has been adopted by Mr. LONGWORTH, and others, in *Cincinnati*, with eminent success, but in the country it is not found so effectual. The other modes, so far as my observation and inquiries extend, have not been successful.

The plan I pursue is a very simple one; *Destruction*—shaking off the insects from the trees on sheets, in the morning and evening, and *killing them*. This method was proposed many years ago, by DAVID THOMAS, one of the best practical horticulturists in Western New-York, and has been adopted by me from the recommendation of my friend Doct. MOSHER, for the past eleven years. Since that period, I have

saved my plums seven years out of the eleven; the frost destroyed them in blossom four years.

I have never failed to secure at least half a crop, on an average, and on some of the trees more than they should have been allowed to bear. To make this plan effective, the plum trees should be planted by themselves, near the house or barn, and if in a paved, or hard smooth yard, so much the better; if in grass, keep it mowed down close; gather up the injured fruit as it falls, and throw it to the pigs. When the trees are young, a sudden blow with the hand will bring down the insects; when old, saw off a lower branch, leaving a stump of 3 or 4 inches, to be struck with a mallet, for the same purpose.

It may be objected that the crop is scarcely worth this trouble, but it requires less time than would be supposed by those who have not tried it; a few minutes in the morning and evening will be sufficient to protect a dozen or two of trees. I have now 36 in bearing, and I find the trouble less than I anticipated. Those the frost spared this spring are now loaded with fruit.

The curculio commences its ravages when the plum is first formed, and continues until the latter end of July. During all that period, in fair weather, they should be shook off early in the evening and destroyed. Perhaps early in the morning alone might answer. The insect flies most at night.

This "shaking system" as it is termed, has been sneered at by some who have felt disposed to be witty on the subject, but I must confess I cannot find a more *practical* remedy. We destroy caterpillars and many other insects found depredating on our fruit trees, and why not the curculio? To be sure it requires *labor*; and so does everything else about the orchard, if you want healthy fruit trees and good crops. For my own part, as an amateur cultivator, the care of fruit trees has always been to me a delightful hobby.

To watch their growth from year to year—to cultivate, prune, and train them—to observe the effects of experimental treatment in culture, in grafting and budding—to gather and test the first fruits of new or famous varieties—and to be enabled to present to friends, splendid specimens of the finest fruits in their seasons, are pleasures that richly repay the toil of the *amateur*, to say nothing of the health

and cheerfulness, obtained by such innocent relaxations from the cares and anxieties of ordinary business pursuits.

Those who cultivate the plum for market, might possibly find the destruction of the curculio by this method, too expensive where labor is high; this, however, will depend on the value of the fruit where sold. R. BUCHANAN. Cincinnati, Ohio, Aug. 13, 1852.

RIVAL HUDSON STRAWBERRY.—This new variety is gaining a high reputation for its productiveness and general value, although not of the highest quality for the table. It is one of the best late sorts, and is fine for the market or for preserving. A correspondent of Moore's New-Yorker, says that a single neglected plant of last year's growth, accidentally overlooked till full of ripe fruit, was found completely surrounded with trusses of berries, on which one hundred and thirty-three ripe ones were found, proceeding from this single root.

EXTENSION OF TREE ROOTS.—We have often had occasion to point out the uselessness of digging small circles of the ground about large fruit trees standing in grass. The Mass. Ploughman says, "Last week we plowed a few furrows in the road-side under apple trees that had been set but five years, and we found roots in plenty, at a distance of ten feet from the trunks of the trees."

Answers to Correspondents.

PEARS AND CHERRIES.—A. J. R. The two best varieties of Pears on Quince for market, which you name, are Louise Bonné de Jersey, and Vicar of Winkfield. Of the sorts on pear roots, we should select Lawrence and Bartlett. For the best three cherries for market we should select Mayduke, Napoleon Bigarreau and Downer's Late Red or Black Tartarian.

SULPHATE OF AMMONIA.—G. M. H. informs us that he was unable to obtain this article at the drug shops in Boston. It can be had of WALTER B. SNOW, 23 Market-street, Providence, R. I., who states that he has sold it to many in that vicinity, who have been much pleased with its operation. Price 25 cts. per lb.

CHINESE WISTARIA.—S. E. J. As your say your plant has been in a sunny exposure, it has probably been too dry at the roots. You had better take it up with care as soon as the leaves fall, replant it in good soil, and when it starts next year, keep it moderately moist.

VINE BORDERS.—S. R. You should drain your vine border thoroughly; the state of it, according to your description, is quite enough to account for your grapes never ripening. In opening your border, cut off all roots you find which have got down into the heavy soil at the bottom.

GERANIUMS.—Jane. There are three or four new varieties of the Scarlet Geranium, far surpassing the old sorts. We saw this year two at THORBURN's at Astoria, named Cerise Unique, and Princess Alice, which you will find well worth attention.—E. S. Some of the best Geraniums at moderate prices, are Hoyer's Crusader, Beck's Star, Beck's Rosy Circle, Lyne's Forget-me-not, Lady Clementina, Beck's Rosamond, and Topping's Rebecca.

SEA KALE.—T. M. This is a most excellent vegetable, and well deserves more general cultivation. We will give an article on its cultivation in an early number.

GOOSEBERRIES.—T. S. The opinions as to mildew among Gooseberries, are various. We have seen them grown successfully, and almost as good as we ever saw them in England, upon the north side of a border, in a garden near New-York, having an open lath fence behind it, against which they were trained. These trees never suffered from mildew, although some in an adjoining garden, planted against a similar fence, but exposed to a western aspect, were covered with it, and the fruit not larger than a fox grape.

S. M.—The Chinese Primrose, or Primula Sinensis, is one of the prettiest things you can get, to enliven your green-house in the fall and winter months. It is cheap, and to be got of any gardener; and the effect produced by half a dozen of them, placed amongst other plants, is magical.

Amateur.—Single Hyacinths are, in the opinion of many, equal in beauty to the double; L'Ami de Cœur, Nimrod, Grand Vainqueur, Paix d'Amiens, are some of the best, and cheapest also.

T. Edwards.—Cytisus racemosus is a more desirable green-house plant than C. rhodopne. There are two varieties of the racemosus; in one the flowers stand up erect, in the other they droop. Get the former of the two. If potted in rich compost, it will grow rapidly, but it

should be repeatedly stopped to make it bushy.

C. Janes.—The best *Epacris* for winter bloom are *Nivalis*, *Impressa variabilis*, and *Campanulata alba*. *E. grandiflora*, when well grown, is one of the most splendid green-house plants, but it does not bloom freely, as early as the others.

B. Smith.—The finest of all the *Andromeda* family, is *A. floribunda*; but we have never seen it, and we do not think it is yet introduced amongst us. The shrub is most beautiful, and the bloom like bunches of Lilies of the Valley.

Notices of Societies.

The *Pennsylvania Horticultural Society* will hold its 24th grand Autumnal Exhibition on the 15th, 16th, and 17th September, in the Philadelphia Museum buildings.

The *American Pomological Congress* will convene in the Museum Building, Ninth-street, below Chestnut, Philadelphia, on the 13th day of September.

The *New-York Hort. Society* will hold its Autumn Exhibition at Metropolitan Hall, Sept. 21, 22, 23.

The *Champlain Valley Hort. Society's* Fall Show, will be held at Plattsburgh, Sept. 20.

Pennsylvania Hort. Society.

The stated meeting of this Society was held in the Chinese Saloon, on Tuesday evening, August 17th. Dr. W. D. Brickle, V. P., in the chair.

There has not been at any former meeting for this month, so fine a display of fruits as on this occasion; the competition was unusually spirited, and the committee for awarding premiums seldom have had their powers of discrimination so thoroughly tested. In Grapes there were some ten contributors, who presented such specimens as have rarely graced the tables of the Society. The Black Hamburgh variety was in the greatest profusion, and the White Nive most beautiful. Of Nectarines, the Red Roman, Elruge, New White and Newington varieties were shown. The dishes of Plums were very numerous, and of many varieties; among them were the Reine Claude, Flushing Gage, Magnumbonum, Gwalah, Washington, Mirabelle, Mammoth, Bingham, and other kinds. The table of Pears was a beautiful sight; the specimens were perfect and in great variety. The apples in most instances remarkably fine, and of many kinds.

This exhibition denotes a most fruitful season, and is the harbinger of a rich display next month, at the American Pomological Congress, and the grand Autumnal of the Society, both of which will occur during the week commencing with the 1st.

The collection of plants shown were very interesting. Peter McKenzieis, contained very many choice *Fuchsias*, *Gloxinias*, *Geraniums*, *Verbenas*, etc.

Caleb Cope's had several recently introduced plants, and were shown for the first time—*Oldenlandia Deppii*, *Franciscan Villosa*, *Gloxinia Madame de Sombriat* and *G. Napoleon*, and beautiful specimens of *Russell Juncea*, *Achimenes Venusta* and *grandiflora*. Also a cut flower of the *Victoria Regia*, the 8th from the same plant, and seen for the first in its second stage of growth, and a design among the flowers ornamenting the same were 3 specimens of the *Cereus glabrus*, (new), and beautiful baskets of exotic and indigenous flowers. In John Lam-

bert's collection were fine plants of *Pentas carnea*, *Roses*, *Hydrangeas*, *Ancinas*, etc.

Mr. Buist exhibited a beautiful cut flower of the *Victoria*, grown in a tank at his premises, Rosedale, Kingessing, expressly erected for the purpose; the seed came from Mr. Cope's plant.

The Boquet designs, and Baskets, were very handsome and creditable. The vegetable tables groined with their great weight, which contained specimens of the finest growth, exhibiting skill in the cultivators. A new variety of salad attracted attention from its speckled appearance, called the Speckled Salad of Austria—"Forelle Kopf Salat," raised in the open ground, from seed brought from Vienna, by Dr. J. Rhea Barton.

The Fruit Committee submitted a very interesting and *interim* report of objects shown to them since the last stated meeting.

Oswego Hort. Society.

The Summer Exhibition of this society was held at the City Hall, July 13, 1852. Hon. E. B. Talcott, President, in the Chair.

The display of flowers exceeded any previous exhibition in variety and quality, although somewhat less in number. Notwithstanding the lateness of the season, the ladies succeeded in presenting a profusion of roses, in collections of 30 to 30 varieties, with marked taste in the arrangement. Messrs. Thorp & Co., of Syracuse, exhibited 70 varieties. Accompanying these were specimens of evergreens, some of them quite new and rare.

The season has been very unfavorable for fruit. Cherries have suffered from Curculio, drought, &c. The show of Strawberries, and other small fruits, was very limited.

List of Cherries exhibited.—Black Tartarian, Blackheart, Napoleon Bigarreau, Late Mayduke, Downer's Late Red, Florence, Grafton, American Heart, Downer's Honey, Redheart, Black Bigarreau, Sparkaw's Honey, Black Eagle, Kentish. A dish of the Flo once from the garden of the Hon. A. P. Grant, deserves special notice, for the beauty, large size, and delicious flavor of the fruit. Black Tartarian and Napoleon Bigarreau, presented by Mrs. L. B. Crocker, were equal to the finest on the table. Mrs. C.'s garden, cultivated with taste and attention, always furnishes us rare and beautiful products at our exhibitions. The former variety, shown by Wm. Worden, (nurseryman), Messrs. Fort, Carrington, the President, and others, was in great perfection. Mr. A. C. Matton exhibited a large and excellent collection from trees newly planted.

The Black Tartarian received the premium of course; it is difficult to find a variety that will successfully compete with it.

Of Strawberries—Hovey's Seedling, White Alpine and a few others were shown, the former taking the premium.

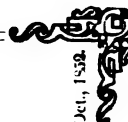
Some four or five kinds of Russet Apples were presented by Hon. J. Turrill, and J. W. Judson, Esq., in sound condition, and of good flavor.

The only Pears at maturity were the *Amire Jonnet*, by Mr. Worden. Thomas, in his Fruit Culturist, says of it very truly, "the earliest pear known—which comprises its merit." A branch of the *Beurre d'Anjou*, from a tree two years old, literally loaded with fruit, exhibited by Mr. Fahnestock, of Syracuse, attests the early productiveness of that sort.

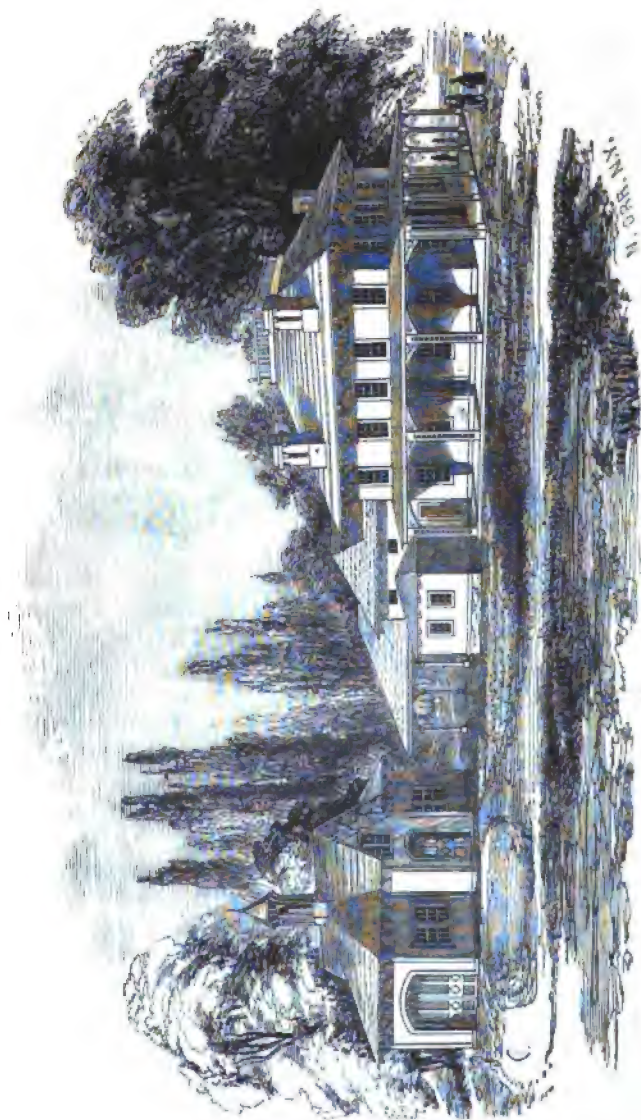
The next exhibition of this Society will be held on the 1st of Sept. next.

We trust the Horticultural Societies in the Union will not neglect some suitable testimonial to the memory of Mr. Downing, whose untimely end we have so suddenly been called to deplore. Here, where his teachings and experience in the department of Art to which he devoted himself, have conduced so much to rational enjoyment, his loss is deeply felt. There is a feeling of grief and sorrow, that a mind from which emanated so much that was really useful and beautiful, is gone from among us.

Yours, &c. J. M. CASEY, Sec'y.



Hort. Oct., 1832.



Southern or Plantation House.



THE
Horticulturist
and

JOURNAL OF RURAL ART AND RURAL TASTE.

Rural Taste and its Mission.

THE cultivation of the beautiful in Nature has been rightly considered an important element in culture. The abstract, philosophical considerations, which render the æsthetic purifying and elevating in its influence, are not the subject matter of this article. We seek to appropriate what is valuable and pleasing in the lessons which Nature, both in her simple and artistic forms—in all her varied aspects—teaches us, without inquiring into the peculiar constitution of the mind, which appreciates and craves the beautiful. We wish to cherish the memory of that great master spirit of Rural Taste, by carrying on the mission which it is his glory to have planted, which it was his ambition to spread in forms of beauty far and wide, and thus to blend the sad funereal tones with the joyous notes of hope and promise which DOWNING drew from the inspiration of nature. We hope to catch some of the echoes of his voice, which, like those of Tennyson's sweet song—

"die in you rich sky.
They faint on hill, on field, on river,
And grow forever and forever."

Rural Taste is an ancient art, dating its origin back to the very infancy of the earth, when man was placed in the garden planted by the hand of God, "to dress and keep it." In all ages, and under all governments, this art has been fostered as the handmaid of prosperity, the purest form of beauty, and the fitting type of that repose and peacefulness which religion and philosophy assume to be the legitimate inheritance of man. Royal munificence has been lavished on it, and the poor cottager has sought in its simple forms, his dearest pleasure. To excel in it has been the ambition of princes, and the pride of the governed. The far-famed hanging gardens of Babylon, and the Academic Groves where sages taught their lessons, attest this, the earliest, the most universal of arts. But for all its antiquity, Rural Taste has not grown old more than nature herself. Time-honored, still rejoicing in immortal youth, this art continues to rear its grand architectural monuments, to spread out its pleasing landscapes, and re-produce itself in fresh beauty to win our love. Being most nearly allied to nature, it has a language for every one, and with its soft, mellow voice, whispers something congenial to every heart. Wherever there is an eye to observe, a mind to reflect, and the taste to appreciate, does admiration of the beautiful, in distinction from the useful, spring up.

The more rude the age, the less do we observe the indications of this love of nature. The Indian was willing to leave nature as he found it, content in gazing on the stars that spoke to him of the Good Spirit, in watching the stream that, like his own life, was ever moving on to some mysterious land, and the trees that, wild and uncultivated, like his own aspiring thoughts, were reaching upwards. On the contrary, the highly cultivated and imaginative Greek made everything around him artistic, invested every tree with a spirit, and every grove with a divinity. The Roman was more practical and stern in his nature, and esteemed this earth as his battle field, rather than his resting place, while the oriental nations made their gardens the synonyms of repose. At the present day the English seek for something stately and rare in their parks and gardens, while the French cultivate what is more showy and artificial.

We have not referred to the history of Rural Taste without a purpose. It has been seen that each nation strove to embody in its parks, gardens, pleasure grounds, and dwellings, the ideas peculiar to its own character, and the conclusion we wish to draw is, that we should do something more than imitate the models which the past has left us. The mission of Rural Taste in this country, is as peculiar and distinct as our institutions, and we cannot adopt the standards of other countries without sacrificing our own individuality. We confess to little sympathy with the notion that our *tastes* in the fine arts are all imported, and that we have no American connoisseurs in the principles of harmony and beauty. Under monarchical forms of government, it is well to dazzle the eye and blind the mind, but here we want no royal parks, or queenly gardens, but instead the evidence of a refinement as universal as the principle of liberty. The rules of art are unquestionably the same in all ages, the same principles of proportion and fitness obtain under all circumstances, but *Taste* is not absolute. There must be adaptation to the character and habits of a people, in order to constitute any work of Rural Art strictly *tasteful*. The Grecian temple was beautiful in the extreme, but it was built to worship other divinities than the one true God. The eastern gardens were the very types of voluptuousness and sensual indulgence, and as such are not suited to the spirit of our day. The magnificent pleasure grounds of more modern times, are proofs of an extravagance which ill comports with the practical tendency of the age. We would not be understood to number ourselves among those who narrow everything down to the criterion of utility and profit, but we contend that Rural Art differs materially and essentially from Sculpture, Painting and Music, in that its forms are predetermined by the nature of the soil, the climate, and the occupation of the inhabitants of any given country. It is the mission of Rural Taste to improve, beautify and adorn the native soil, not to re-produce the scenery and products of foreign ones.

The greatest danger which at present threatens the interests of rural decoration in this country is that of imitating to too great an extent the examples of other and older nations. We plant foreign trees instead of native ones. We build Gothic or Grecian houses, without considering whether they are suited to our climate and wants, or harmonize with the surrounding scenery. We strive to fill our parks with something rare and imported, instead of adorning them with the equally beautiful and ornamental products of our own soil. This rivalry in importing foreign plants, fruits, and flowers is too nearly akin to the pedantry of those *excessively travelled* gentlemen who assume *foreign airs*,—to the no small detriment of American independence—to be long pursued by intelligent cultivators. We ought, as tillers and beautifiers of the land, to win for ourselves the treasures which the earnest mind and the practical hand bring forth from mother earth.

It is an old adage that "he who follows must always be behind," and so the history

of this country has thus far shown. It was not till POWERS struck out for himself a bold and original course that he excelled in sculpture. So long as American authors followed implicitly the teachings of European critics, we had no American literature; but when some dared to write to suit the tastes and demands of our own people, American authors soon obtained an acknowledged reputation. So too has it been with Rural Taste. We had no American houses,—save our log-houses—parks, or gardens, till DOWNING brought his own peerless ability to the work. However gratifying the results of his labors, what he has accomplished should be suggestive of more vigorous exertion.

We do not mean by anything we have said, that the established rules of art should not be studied, or that very much of foreign acquisition may not be added to our own improvements. We only wish to make prominent the idea that our efforts should be such as to stamp American talent, ingenuity and taste upon our Rural Art, as well as upon the more practical and useful products of our handi-work. It is manifestly useless to vie with crowned heads and princely coffers in rural decoration, and indeed magnificence and splendor are hardly compatible with democratic institutions. But one thing we can accomplish, if we will—we can make our whole country *beautiful*. The fact that a majority of the inhabitants of the rural districts hold the soil in fee simple—that intelligence and cultivation are more universal than in other countries, make this comparatively easy. Let cottage after cottage, in the length and breadth of our land, tell its tale of humble happiness and contentment—let trees, mile after mile, throw their refreshing shade on our highways—let flowers bloom along the walks of our obscurest laborers, as well as in the luxurious gardens of the wealthy, and we can well dispense with the more pretending mansion, the extensive park, and the costly green-house. In our gardens and around our houses, give us the emblems of quietness and repose. Let our public squares be planted with the towering elm, the gigantic oak, and the stately maple, fit types of our freedom and strength, together with the pine, the fir, and the spruce, to symbolise the unfading nature of our institutions. Let fountains sparkle in the sunlight, and flowers perfume the free air; it will make the blood bound more joyously in our veins, and attach us more strongly to our native land. Let our homes be made attractive by the simple adornments, which a love of nature will suggest, and we shall be bound to them by a new tie, and drawn unconsciously into closer sympathy with the world around us.

There is no way in which real refinement so readily shows itself as in the decoration of a home. In the idea of refinement we include not only intellectual culture, but that harmony of mind and heart, that balance of thought and affection, which fits man for social life and endears him to his fellows. A coarse and vulgar nature sees nothing to admire in rural embellishment, while a truly cultivated man would as soon be in purgatory as forced to live away from the spot which his own hands have beautified, away from the shade of his favorite trees, and the fragrance of his loved flowers. It is true that men of high talent and superior culture are often so long separated from the country, that they forget the charms which it once had for them; yet place these men in favorable circumstances and they will turn as spontaneously to the tasteful arranging of houses, gardens, and grounds, as the vine to its support. It is a mode of expressing the finer feelings of humanity, and the capability of living for higher than selfish ends. Other things being equal, the advancement of Rural Taste will be exactly commensurate with the progress of true refinement, and it is its proper mission to fix in home-like dwellings, in the living green of tree and shrub and vine, the tokens of the virtue and intelligence of our citizens

GRAPES FOR A COLD VINERY.

On the 29th of August, I took from my vines, one bunch each, of the following kinds of grapes: Muscat Blanc Hatif, White Muscat of Alexandria, Grizzly Frontignan, and Royal Muscadine, and submitted them to the taste of myself, and my friends—and report the following as the result, for the benefit of those who wish to select grapes for their own use.

The Muscat Blanc Hatif was not a very fair specimen, being the only bunch on the vine, and not very perfect, and consequently, from that, or some other reason, was uniformly rejected by all the tasters.

After a fair trial, one, a lady, preferred the White Muscat of Alexandria, owing to its exquisite musky flavor. Miss C. gave the preference to the Grizzly Frontignan, while a gentleman who was present shortly after, and tried these two varieties, gave preference to the Royal Muscadine. For myself, for very exquisiteness of flavor, and perfumed aromatic taste, I gave the preference to the Grizzly Frontignan. It is truly a delicious grape, though in its absence, it would be difficult to call either the Royal Muscadine or the White Muscat of Alexandria, second to it. But while present, in the fulness of its flavor, it seemed to me to carry off the palm. This result may not accord with other's taste, but may serve as some guide for those who want practical experiments as a guide for selection. For myself, I would think no vinery perfect without the three last named varieties. The White Muscat of Alexandria proved a very thrifty bearer in my vinery last year, while this season the Royal Muscadine has borne very fully, and ripened its fruit finely.

I know of no branch of horticulture which pays the amateur better than a vinery, (mine is a cold house,) if it is well prepared by a skilful gardener in the outset; but I would not advise an unskilled gardener to undertake its erection. If the border be once well made, and the house properly constructed, and filled with proper varieties of grapes, then, with the aid of J. FISK ALLEN's little pamphlet, which can be procured for a small sum, there will be no difficulty in the amateur, with proper care, realizing a satisfactory return for his outlay, in the delicious fruit he will produce for his own table. To aid as much as possible, those who desire to make a selection, I will give the varieties I have in my own house, as I have often felt the need of such lists in making selections myself:

1 Muscat Blanc Hatif—3 Wilmot's Black Hamburg—1 Grizzly Frontignan—1 White Frontignan—1 Pitmaston's White Cluster—1 White Sweetwater—1 Black Prince—1 Syrian—1 Royal Muscadine—1 Decan's Superb—1 White Muscat of Alexandria—1 White Nice—1 Black Hamburg—1 Black Frontignan.

Winter before last I laid the vines down, covering them loosely with straw. During the winter the field mice got in, and seriously injured some of the canes by stripping them on one side, and in some places entirely, of their green bark. Last winter I suffered them to remain erect, and only filled spent tan-bark around them as high as I could conveniently, say about a foot, and wrapped the remainder of the cane loosely with successive folds of a newspaper, and covering them in no other manner. They stood the winter well, not being at all injured, except one Black Hamburg, which, for some reason, whether from being imperfectly protected or not I cannot determine, died down to the ground. It however came forward again this summer, and has made a remarkably fine growth. I think the protection I gave them of papers, would in all ordinary winters be sufficient. I thought, however, this winter I should lay them down, and cover them entirely with spent tan-bark, believing that that will effectually protect them from the mice.

Newark, Wayne county, New-York.

S. K. WILLIAMS.

TRANSPLANTING LARGE TREES.

BY CHARLES WYLLYS ELLIOTT, NEW-HAVEN, CT

THERE are many places which would be benefited by the presence of a few large trees; whose owners would gladly spend some money to see trees growing near their dwellings, which should give, not only shade, but should clothe them with a leafy garment to hide their nakedness. What a difference there is between a house—no matter how well proportioned and tasteful—standing upon a bare plane or an exposed hill, and one covered and sheltered by the protecting arms of shadowy trees, every lover of home and the country has too often felt. It is not always possible to choose a site which is furnished with these, and other desirable circumstances; so that trees must be supplied by the owner, and he and they must bide their time. But there are two ways at least of going about this.

One is, to contract with some enterprising early rising man of the neighborhood, to plant out a number, perhaps one or two hundred, say at fifty cents each, or even sixty cents, should he warrant them to grow. He goes to his swamp, where the trees run up tall and straight, and selects nice, handsome stems, about four inches in diameter, and say twenty-five feet in height; he takes his axe and cuts down into the shaky bog, through the four or five roots of the tree, at twelve to fifteen inches from the stem, pulls the tree down to the ground, cuts off the whole of the head, say at about ten feet from the root, and the tree is then ready to be loaded into a cart for planting on any gentleman's place. He does this again and again; and it is quick work, for there are usually but a few long naked roots in such covers, and the labor of getting trees up is small. Having loaded them, they are ready for transportation the next day. Now in spring and autumn the nights are apt to be frosty—and should the roots be exposed to a pretty severe freezing, it would not be surprising. But let them once be delivered on the naked grounds. What then? It is easiest to plant them in rows—and saves all thought and consultation either on the part of the owner or a landscape gardener. The planter is to have fifty cents each, and he can't spend his time shilly-shallying; so he opens the holes twenty-five inches in diameter, (or thirty-one inches,) because twice 12 is 24, and twenty-five inches is large enough—and it may be twelve inches deep to the subsoil, which is usually hard and sterile; he places the roots in it, taking great care that the stem is perpendicular and true in the line; then he covers the roots quickly to keep them from the air, tramples the earth, and the deed is done,—the tree planted.

How does the tree grow? Sometimes well. Elms are especially tenacious of life; often though, they push weak growth along the stem the first season, for there is some strength in it, and dwindle away during the summer drouth or in the second year. Should they grow they are long in making a head; for trees are like men, starvation, neglect, want of cultivation—inevitably induce weakness, disease and death.

This is one method of planting;—there is another, and the routine of planting a single tree, one of a number which has been planted and have thriven now the third year, will suffice.

1. A hole to receive the tree was opened in the month of October, sixteen feet in diameter and three feet deep. All the tops and good soil, containing some of the yellow subsoil, was thrown out by itself—the subsoil, gravel, &c.. was thrown up and carted away, and other earth brought in its place. A horse cart load of rotted stable manure, and five

bushels of ashes, were well mixed with about one half of the good soil, and about one foot of depth of this compost was spread over the bottom of the hole, which was then ready to receive the roots of the tree.

2. The tree selected was an elm, standing in a damp wood, but so that the head was well branched. At the distance of five feet from the body, (which measured *forty-two* inches in circumference at one foot from the ground,) a trench was opened two feet wide; the long roots were not cut, but the trench was sunk so that the tree could be gradually undermined, and with a pick the soil was dug away from among the roots so that the diameter of the ball of earth was about eight feet; while the digging was continued under the roots as far as it was possible, the fibrous roots being tied up so as to be but little broken. This done, the long surface roots were followed out, say ten or twelve feet from the tree, cut off, turned up, and tied to the stem. A block and tackle, fastened in the top of this tree, and to the root of one at some distance, was used to pull the tree over to an angle of 45°, and a stone sled was placed so that one half of the ball would rest on it—the tree was then turned into it, and another sled placed under the ball. The side of the trench was then cut away so that the sleds would run out of the hole; ten yoke of oxen were chained to the sleds, and a chain was carried from around the stem to the draft chain, so that the tree might not slip from the sleds. The tree was then quietly slid from its old place and into its new one—the side of the new hole being cut down so that the oxen could travel through the hole and leave the tree, sleds and all, in it. The tree was then turned down first on one side, then on another; and both sleds being removed, it was ready to have its roots placed and covered. This was carefully done by turning the tree from the perpendicular, and filling in with the hand and a wooden rammer, every cavity in the roots, with the compost earth—the bruised and mangled roots being first cut away with a knife or axe. The tree was planted one foot *deeper* than it stood in the woods. The long roots were stretched and pegged down to act as anchors, and the hole being then filled with the common earth—so far the roots were disposed of.

Three strong props were then securely placed so that they could not chafe the bark, or allow the tree to be disturbed by winter or summer winds—and then the autumn work was done.

3. In the spring, about first May, the top was lopped, thinned from one-third to one-half, just as the buds were breaking vigorously. The ground over the surface of the hole was mulched, (covered with manure four inches deep;) the props were examined, the tree righted, and then it took its chance. Once during the dry weather of the summer, some twenty-five buckets of water were poured over the roots.

The cost of the tree in its place was thirty dollars, it having been moved a quarter of a mile—and it is worth the cost. It, with others, now stands on Mr. SAM'L. E. FOSTER'S place, at New-Haven, where it promises well.

5. Better roots can be had by this process than by cutting a ball and freezing it—because the roots need not be cut so short.

6. The tree should be planted deeper than in the wood, for many reasons.

7. The props are very important for two years at least, as the swaying of the tree in the wind would otherwise break the young new roots.

8. One-half the top may be cut away safely. Mr. JAS. FELLOWS, who has planted large trees with success, in this neighborhood, thinks that *none* should be cut away; he and I don't agree.

9. Mulching is one of the very best practices—and so is watering the *leaves* in dry weather, with a barrel of water and a hand engine.

The above tree was the largest of some twenty-five which were removed in this way, three years since. They have grown as well as such large trees could be expected to grow, and but two have died; one large Elm, which was raised with roots much broken, and one swamp White Oak. The trees were mostly Elm, Oak, and Dog-wood, and were from twelve to forty-two inches in circumference. Since then, Mr. FELLOWS, in this neighborhood, has planted a great number of large trees, with good success. It is quite clear that trees of great size can be safely removed and planted, so as to grow. Two large Hickorys were planted out this year by this method; they have both gone through this season well, and may yet thrive in their new position—though they are not a safe tree to touch.

CHARLES WYLLYS ELLIOTT.

New-Haven, Aug. 15, 1852.

SUBURBAN GARDENING.

BY P. B. M. BROOKLYN, N. Y.

The above phrase is intended to indicate gardening adapted to grounds in the vicinity of our large cities, and, according to my ideas, is a different thing from landscape gardening, of which latter there is little in this country that deserves the name, and perhaps will not be very soon. For some years past, strenuous efforts have been made by a few individuals, to fix in the public mind, a taste for landscape gardening, and foremost among those who have labored to accomplish this most desirable object, stood the late lamented Editor of the *Horticulturist*. While nobody would rejoice more than myself, at the universal diffusion of a taste for this most beautiful art, it has always seemed to me that the subject was not properly initiated to accomplish any great results. The difficulties are many, and not easily surmounted. Our habits, our laws of succession, our utilitarian spirit, our artificial and superficial tastes, among other things, are all against landscape gardening, properly so called. It will be perceived that I use the word gardening as a general term, of which landscape gardening, suburban gardening, &c., are species. While landscape gardening knows no narrow bounds, suburban gardening may be circumscribed within comparatively narrow limits; the one retires far from the city, the other lingers on its skirts; of the one, much has been said, and well said; of the other, little or nothing usefully. If the talent which has been so zealously devoted to the cause of landscape gardening, had been, in the first instance bestowed upon what I have termed suburban gardening, there can be little doubt that more gratifying results would have been produced, and the true interests of landscape gardening have been better subserved. By attempting too much, it generally happens that we accomplish almost nothing.

There are some, doubtless, who will feel the least degree of contempt for all efforts which have for their object nothing higher than the improvement and beautifying of a few suburban lots; but let them "not despise the day of small things." Those who know me will bear witness that I am not one to follow by paths and devious ways, when a broad road leads straight to the goal; and yet I am thoroughly convinced, that in the matter of gardening we must begin in this small way; we must plant the acorn before we can get the oak.

In the suburbs of New-York, Brooklyn, and other large cities, reside many persons of wealth, occupying dwellings with plots of ground embracing from two to thirty lots, or more. I instance New-York and Brooklyn, because I am most familiar with them and their wants; and then, too, my love, like most other people's charity, begins at home. Some

of these persons, I know, keep professional gardeners, and can show fine plants; but, notwithstanding this, there is generally such an absence of taste in all that pertains to design and effect, and such want of judgment in selection and grouping, that I must withhold the praise of good gardening. This may be said of some of the best gardens about Brooklyn and New-York: of the remainder, the less said the better.

This state of things is owing to various causes; among others to the fact that nearly all our gardeners are foreigners, (I say it with respect,) who inconsiderately follow here, precisely the same system which they practiced at home. There is reason to hope for a change in this particular; for some of the most intelligent of these gardeners have acknowledged to me their mistake, and others are beginning to perceive it. We must have then, notwithstanding all that has been said on this subject, an American system of gardening. I mean by this, not alone a system of cultivation adapted to our own peculiar soil and climate, but also a style of design in keeping with simple good taste, and the habits of a republican people; and in addition to this, some decided changes in the class of plants which frequently occupy our gardens, or at least in the grouping and arrangement.

Let it not be supposed, because I have instanced the rich, that I would confine gardening to them; by no means. The rich and the poor, and the man in moderate circumstances, the merchant and the mechanic, should alike have their gardens; but if there were a necessity for confining gardens to one class alone, then I would say, let that class be the poor. Let them have at least one little spot where they can pass the evening of their days in quiet repose under their own vine and peach tree. How much brighter and better this world would be, if each man had a spot that he could call his own! But to proceed. I have heard the remark made by not a few, that they would take pleasure in beautifying their grounds if they only had the right kind of knowledge to do it themselves, or to enable them to know that the work was properly done if executed by others. Now, Mr. Editor, if it be your wish, it is this very knowledge that I propose to communicate, with proper illustrations. And here, for the present, I will conclude these general remarks.

P. B. M

Brooklyn, Aug. 13, 1852.

THE PEAR TREE IN FRANCE.

BY A NEW-YORK AMATEUR.

BUSINESS called me in the fall of last year to France; and I was so much pleased and surprised by what I saw there, in reference to the universal culture of the pear, that I am induced to send you some remarks upon it, which I think may interest your readers. I landed at Havre, and was, much against my inclination, detained there by business longer than was agreeable to me. My time was, however, by no means fully occupied; and I whiled away many an hour which would otherwise have hung heavily on my hands, by exploring the surrounding country, which, by-the-by, is full of interest to a visitor; and the charm of novelty being added to the beauties of nature, in my case, at any rate, a protracted stay in that part of the country, gradually became not only endurable but interesting. To make my explanation of the particular use of the pear tree, to which I wish to call attention in these remarks, intelligible, I must shortly describe the locality of Havre; or those of your readers who have not been on the Continent of Europe, will not understand me. The town itself is placed at the entrance of the river Seine; embosomed in a splendid bay, said to be, with our own New-York, and those of Naples and

Constantinople, the finest in the world. But there is one point in which our New-York bay is incomparably more valuable in a mercantile point of view, which is this, that the bay at Havre forms the segment of a semicircle, perfectly open to the sea and exposed to a heavy swell, which, during six or eight months of the year, renders it unsafe for merchantmen to ride at anchor outside the harbor. Havre is a fortified town surrounded by a moat—into which the tide flows: it is commanded by high land in the rear, which forms almost an amphitheatre, rising by rather a steep ascent from the back of the town. This constitutes a very considerable suburb to the place, being covered with streets of houses, intersected by villa residences dispersed over the hill side, and forming a convenient outlet to the mass of mercantile inhabitants congregated in this, the French market for our cotton. There is, moreover, a considerable space extending over a flat strip of ground, varying in breadth from fifty yards in some places, to a quarter of a mile in others, between the town itself and the “cote,” as the hill side to which I have alluded, is called—and this flat is covered by a mass of small dwellings, principally inhabited by store keepers, artisans and working people, to which small peices of garden, or more properly speaking, yards, are attached. They are of very limited extent; but to these it is that I wish to direct attention. The size of them varies considerably, but a large portion of them are not more than from fifteen to twenty feet square. Yet in these little places, subject though they be, to all the uses of a poor and needy class of a people, such as are scarcely to be found in this country, there is to be seen some five or six, or more pear trees, varying in number according to the size of the ground, covered with fruit—always of fair growth, and frequently as fine as can be found anywhere. Often have I stopped to admire the appearance of the trees and the abundance of the crop, and sometimes to gossip with the old ladies, who are generally to be found outside the door, pursuing some of their manifold domestic operations—the great majority of which they delight to perform in the open air! They are all, apparently, pear “fanciers,” and are much pleased by the approving smile of the traveller, particularly if happens to be a foreigner. And they are very communicative upon the subject, answering readily any inquiry that may be addressed to them, and enlarging with great volubility upon the character of the fruit, the wonderful crops that particular years have produced, and last, not least, upon the “politesse” of “Monsieur” who has had the “complaisance” to make the inquiry! These trees are almost invariably grown as standards, from six feet to ten in height, and pyramidal in shape—well furnished with branches from the ground to the top, and forming, as they do, a constant feature in all gardens, from these cottage plots, to the extensive grounds of the rich, where they are seen to convert the straight walks into perfect avenues of pomona, it is hardly possible to walk five minutes, without being reminded of your presence in the land of pears.

Another thing connected with this subject, which I particularly remarked, was that you never see an inferior variety grown there. Many, indeed most of the sorts, were old favorites, but most of them deservedly so. One of the Doyenne varieties was of very general culture, and becomes to those whose circumstances oblige them to sell their fruit, a source of considerable profit. Very large quantities of these pears are bought up every year, for exportation to St. Petersburg, where they fetch a high price, and the demand for this market is so regular, that they are always expensive, as compared with most other kinds in the Havre market.

I had several conversations, both with nurserymen and others, upon the modes of culture adopted, and found it was of the simplest character. During the first three years from the grafting of the stock, they annually lift the plants, which they consider essential

to the formation of a good large ball of roots; and certainly, in that respect, their trees leave nothing to be desired. Nothing can exceed the healthy appearance of the roots of some, which late in the year I saw a man lifting in a nursery there—and in quantity they did ample justice to the cultivator. After that age they do but little except the pruning, which they well understand, and which I took some pains to make myself master of. I brought a few trees home with me, which are now bearing a small crop only, as from an accident they suffered injury on the voyage, and I have had difficulty to recover them.

In the small villages around Havre, of which there are several, every working man's cottage has its half dozen pear trees, and they appear to be regarded as an essential appendage to the domicile of a French artisan.

In the village gardens I observed, also, that the pear trees in no way encroached upon what some may regard as the more appropriate occupants of the cottagers plot—I mean cabbages and potatoes. In the suburbs I saw few vegetables, but in the villages, the gardens were well stocked with them, the pears being planted at the corners and down the sides of the divisions of the ground, where, (as was the case oftentimes in the villages,) the gardens attached to the cottages were of fair extent. The effect produced by the whole was pleasing to a degree I shall not easily forget, and conveyed to the mind an idea of enjoyment which, alas, was too often confined to the exterior of these humble abodes! For the laboring classes in that fine but unhappy country, are poor and destitute of the necessities of household comforts, to an extent which it is painful to witness. Volatile and unreflecting, however, the French husbandman appears to realise the aphorism of the poet,

"Man wants but little here below,
Nor wants that little long."

and singing his "*Marseillaise*" as he drives his plough, where no "babbling echo" can waft his "*treasonable*!" lay to the ears of a "prince president," or his miserable minions, he cheerfully toils through his daily task, and returns to his naked home light hearted, and contented with his lot.

What I wish to impress upon your readers, is the beautiful effect produced, and the air of rural taste given to a neighborhood, by this universal growth of the pear tree. Until seen, it is difficult to be estimated. But I will engage that if the lovers of horticulture in any one city, will exert themselves, and distribute a few pear trees amongst their neighbors, (and they are cheap enough here now,) so as to get a goodly show of them, that before three years are over, if they are grown in the conical shape I have described, and which is well known, there will not be an inhabitant in the vicinity that would fail to regard them as a magnificent addition to the elegances of the place. Then, without entering into more expensive or time occupying floricultural pursuits," "pear societies" may be started, and every fall would bring along its pear exhibition, and with it a day of joy and gaiety for all the lads and lasses around!

To all, I say then, plant pears. If you don't eat them yourself, give them away, or sell them if you like; and moreover, if you manage them so badly that you get no fruit, (you will be rather clever to *prevent* having more or less three years out of four,) you will still have, if well trained, as fine an object as an ornamental tree—as almost any deciduous trees of the size that you can find. Therefore, I say again, plant pear trees.

AN AMATEUR.

A SOUTHERN OR PLANTATION HOUSE.

BY LEWIS F. ALLEN, BLACK ROCK, N. Y.*

THE proprietor of a plantation in the south, or south-west, requires altogether a different kind of residence from the farmer of the northern or middle states. He resides in the midst of his own principality, surrounded by a retinue of dependents and laborers, who dwell distant and apart from his own immediate family, although composing a community requiring his daily care and superintendence for a great share of his time. A portion of them are the attaches of his household, yet so disconnected in their domestic relations, as to require a separate accommodation, and yet be in immediate contiguity with it, and of course, an arrangement of living widely different from those who mingle in the same circle, and partake at the same board.

The usual plan of house-building at the south, we are aware, is to have *detached* servants' rooms, and offices, and a space of some yards of uncovered way intervene between the family rooms of the chief dwelling and its immediate dependents. Such arrangement, however, we consider both unnecessary and inconvenient; and we have devised a plan of household accommodation which will bring the family of the planter himself, and their servants, although under different roofs, into convenient proximity with each other. A design of this kind is here given.

The style is mainly Italian, plain, substantial, yet, we think becoming. The broad veranda, stretching around three sides, including the front, gives an air of sheltered repose to what might otherwise appear an ambitious structure; and the connected apartments beyond, show a quiet utility which divests it of an over attempt at display. Nothing has been attempted for appearance, solely, beyond what is necessary and proper in the dwelling of a planter of good estate, who wants his domestic affairs well regulated, and his family, and servants duly provided with convenient accommodation. The form of the main dwelling is nearly square, upright, with two full stories, giving ample area of room and ventilation, together with that appropriate indulgence to ease which the enervating warmth of a southern climate renders necessary. The servants' apartments, and kitchen offices are so disposed, that while connected, to render them easy of access, they are sufficiently remote to shut off the familiarity of association which would render them obnoxious to the most fastidious—all, in fact, under one shelter, and within the readiest call. Such should be the construction of a planter's house in the United States, and such this design is intended to give.

A stable and carriage house, in the same style, is near by, not connected to any part of the dwelling, as in the previous designs—with sufficient accommodation for coachman and grooms, and the number of saddle and carriage horses that may be required for either business or pleasure; and to it may be connected, in the rear, in the same style of building, or plainer, and less expensive, further conveniences for such domestic animals as may be required for family use.

The whole stands in open grounds, and may be separated from each other by enclosures, as convenience or fancy may direct.

The roofs of all the buildings are broad and sweeping, well protecting the walls from storm and frosts, as well as the glaring influences of the sun, and combining that comfortable idea of shelter and repose so grateful in a well-conditioned country house. It is true, that the dwelling might be more extensive in room, and the purposes of luxury en-

* We copy this design by permission of the Author, from Mr. ALLEN's "Rural Architecture," recently published by C. M. SAXTON, New-York, and which was reviewed in the July No. of this work, by Mr. DOWLING.

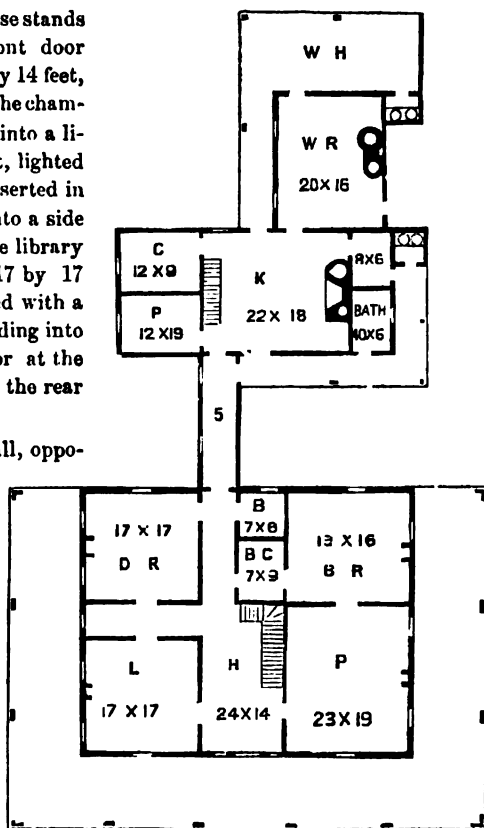
larged; but the planter on five hundred, or five thousand acres of land can here be sufficiently accommodated in all the reasonable indulgences of family enjoyment, and a liberal, even an elegant and prolonged hospitality, to which he is so generally inclined.

The chimneys of this house, different from those in the previous designs, are placed next the outer walls, thus giving more space to the interior, and not being required, as in the others, to promote additional warmth than their fireplaces will give, to the rooms. A deck on the roof affords a pleasant look-out for the family from its top, guarded by a parapet, and giving a finish to its architectural appearance, and yet making no ambitious attempt at expensive ornament. It is, in fact, a plain, substantial, respectable mansion for a gentleman of good estate, and nothing beyond it.

INTERIOR ARRANGEMENT.—This house stands 50 by 40 feet on the ground. The front door opens from the veranda into a hall, 24 by 14 feet, in which is a flight of stairs leading to the chambers above. On the left a door leads into a library, or business room, 17 by 17 feet, lighted by three windows. A fire place is inserted in the outer wall. Another door leads into a side hall, six feet wide, which separates the library from the dining-room, which is also 17 by 17 feet in area, lighted and accommodated with a fireplace like the other, with a door leading into it from the side hall, and another door at the further right hand corner leading into the rear hall, or entry.

On the right of the chief entrance hall, opposite the library, a door opens into the parlor or drawing-room, 23 by 19 feet in area, lighted by three windows, and having a fireplace in the side wall. A door leads from the rear side of the parlor into a commodious nursery, or family bedroom, 19 by 16 feet in size, lighted by a window in each outer wall. A fire place is also inserted on the same line as in the parlor. From the nursery a door leads into and through a large closet, 9 by 7 feet, into the rear hall. This closet may also be used as a sleeping room for the children, or a confidential servant maid, or nurse, or devoted to the storage of bed linen for family use. Further on, adjoining, is another closet, 7 by 6 feet, opening from the rear hall, and lighted by a window.

Leading from the outer door of the rear hall is a covered passage six feet wide, 16 feet long, and one and a half stories high, leading to the kitchen offices, and lighted by a window on the left, with a door opening in the same side beyond, on the side front of the establishment. On the right, opposite, a door leads on to the kitchen porch, which is



GROUND PLAN.

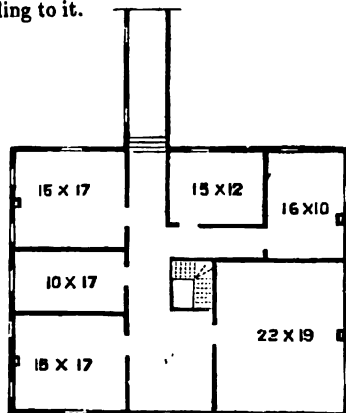
six feet wide, passing on to the bath room and water closet, in the far rear. At the end of the connecting passage from the main dwelling, a door opens into the kitchen, which is 24 by 18 feet in size, accommodated with two windows looking on to the porch just described. At one end is an open fireplace with a cooking range on one side, and an oven on the other. At the left of the entrance door is a large, commodious store room and pantry, 12 by 9 feet, lighted by a window; and adjoining it, (and may be connected with it by a door, if necessary,) a kitchen closet of the same size, also connected by a corresponding door from the opposite corner of the kitchen. Between these doors is a flight of stairs leading to the sleeping rooms above, and a cellar passage beneath them. In the farther right corner of the kitchen a door leads into a smaller closet, 8 by 6 feet, lighted by a small window looking on to the rear porch at the end. A door at the rear of the kitchen leads out into the porch of the wash room beyond, which is six feet wide, and another door into the wash room itself, which is 20 by 16 feet, and furnished with a chimney and boilers. A window looks out on the extreme right hand, and two windows on to the porch in front. A door opens from its rear wall into the wood house, 32 by 12 feet, which stands open on two sides, supported by posts, and under the extended roof of the wash room and its porch just mentioned. A servants' water-closet is attached to the extreme right corner of the wood house, by way of lean-to.

The bath room is 10 by 6 feet in area, and supplied with water from the kitchen boilers adjoining. The water-closet beyond is 6 feet square, and architecturally, in its roof, may be made a fitting termination to that of the porch leading to it.

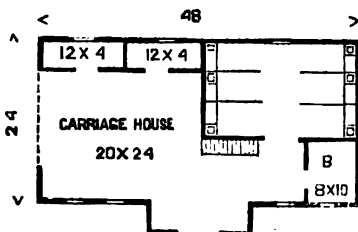
The main flight of stairs in the entrance hall leads on to a broad landing in the spacious upper hall, from which doors pass into the several chambers, which may be duly accommodated with closets. The passage connecting with the upper story of the servants' offices, opens from the rear section of this upper hall, and by the flight of rear stairs communicates with the kitchen and out-buildings. A garret flight of steps may be made in the rear section of the main upper hall, by which that apartment may be reached, and the upper deck of the roof ascended.

The sleeping-rooms of the kitchen may be divided off as convenience may dictate, and the entire structure thus appropriated to every accommodation which a well regulated family need require.

The carriage-house is 48 by 24 feet in size, with a projection of five feet on the entrance front, the door of which leads both into the carriage-room and stables. On the right is a bed-room 10 by 8 feet, for the grooms, lighted by a window, and beyond are six stalls for horses, with a window in the rear wall beyond them. A flight of stairs leads to the hay loft above. In the rear of the carriage-room is a harness-room, 12 by 4 feet, and a granary of the same size, each lighted by a window. If farther attachments be required for the accommodation of out-building conveniences, they may be continued indefinitely in the rear.



CHAMBER PLAN.



CARRIAGE-HOUSE.

MISCELLANEOUS.—It may strike the reader that the house just described has a lavish appropriation of veranda, and a needless side-front, which latter may detract from the *precise* architectural keeping that a dwelling of this pretension should maintain. In regard to the first, it may be remarked, that no feature of the house in a southern climate, can be more expressive of easy, comfortable enjoyment, than a spacious veranda. The habits of southern life demand it as a place of exercise in wet weather, and the cooler seasons of the year, as well as a place of recreation and social intercourse during the fervid heats of summer. Indeed, many southern people almost live under the shade of their verandas. It is a delightful place to take their meals, to receive their visitors and friends; and the veranda gives to a dwelling the very expression of hospitality, so far as any one feature of a dwelling can do it. No equal amount of accommodation can be provided for the same cost. It adds infinitely to the *room* of the house itself, and is, in fact, indispensable to the full enjoyment of a southern house.

The side front in this design is simply a matter of convenience to the owner and occupant of the estate, who has usually much office business in its management; and in the almost daily use of his library, where such business may be done, a side door and front is both appropriate and convenient. The *chief* front entrance belongs to his family and guests, and should be devoted to their exclusive use; and as a light fence may be thrown off from the extreme end of the side porch, separating the front lawn from the rear approach to the house, the veranda on that side may be reached from its rear end, for business purposes, without intruding upon the lawn at all. So we would arrange it.

Objections may be made to the *sameness* of plan, in the arrangement of the lower rooms of the several designs which we have submitted, such as having the nursery or family sleeping room on the main floor of the house, and the uniformity, in location, of the others; and that there are no *new* and *striking features* in them. The answer to these may be, that the room appropriated for the nursery or bedroom, may be used for other purposes equally as well; that when a mode of accommodation is already convenient as may be, it is poorly worth while to make it less convenient, merely for the sake of variety; and that utility and convenience are the main objects to be attained in any well-ordered dwelling. These two requisites, utility and convenience, attained, the third and principal one—comfort—is secured. Cellar kitchens—the most abominable nuisances that ever crept into a country dwelling—might have been adopted, no doubt, to the especial delight of some who know nothing of the experimental duties of housekeeping; but the recommendation of these is an offence which we have no stomach to answer for hereafter. Steep, winding, and complicated staircases might have given a new feature to one or another of the designs; dark closets, intricate passages, unique cubby-holes, and all sorts of inside gimcrackery might have amused our pencil; but we have avoided them, as well as everything which would stand in the way of the simplest, cheapest, and most direct mode of reaching the object in view: a convenient, comfortably-arranged dwelling within, having a respectable, dignified appearance without—and such, we trust, have been thus far presented in our designs.

LAWN AND PARK SURROUNDINGS.—The trees and shrubbery which ornament the approach to this house, should be rather of the graceful varieties, than otherwise. The weeping willow, the horse chestnut, the mountain ash, if suitable to the climate; or the china-tree of the south, or the linden, the weeping-elm, and the silver-maple, with its long slender branches, and hanging leaves, would add most to the beauty, and comport more closely with the character of this establishment, than the more upright, stiff, and unbending trees of our American forests. The Lombardy-poplar—albeit, an object of fashiona-

ble derision with many tree-fanciers in these more *tasty* days, as it was equally the admiration of our fathers, of forty years ago—would set off and give effect to a mansion of this character, either in a clump at the back-ground, as shown in the design, or occasionally shooting up its spire-like top through a group of other trees. Yet, if built in a fine natural park, or lawn of oaks, with a few other trees, such as we have named, planted immediately around it, this house will still show with fine effect.

The style of finish given to this dwelling may appear too ornate and expensive for the position it is supposed to occupy. If so, a plainer mode of finish may be adopted, to the cheapest degree consistent with the manner of its construction. Still, on examination, there will be found little intricate or really expensive work upon it. Strength, substance, durability, should all enter into its composition; and without these elements, a house of this appearance is a mere bauble, not fit to stand upon the premises of any man of substantial estate.

If a more extensive accommodation be necessary, than the size of this house can afford, its style will admit of a wing, of any desirable length on each side, in place of the rear part of the side verandas, without prejudice to its character or effect. Indeed, such wings may add to its dignity and consequence, as comporting with the standing and influence which its occupant may hold in the community wherein he resides. A man of mark, indeed, should, if he live in the country, occupy a dwelling somewhat indicating the position which he holds, both in society, and in public affairs. By this remark we may be treading on questionable ground, in our democratic country; but, practically, there is a fitness in it which no one can dispute. Not that extravagance, pretension, or any other *assumption* of superiority should mark the dwelling of the distinguished man, but that his dwelling be of like character with himself: plain, dignified, solid, and, as a matter of course, altogether respectable.

It is a happy feature in the composition of our republican institutions, both social and political, that we can afford to let the flashy men of the *day*—not of *time*—flaunter in all their purchased fancy in house-building, without prejudice to the prevailing sober sentiment of their neighbors, in such particulars. The man of money, simply, may build his “villa,” and squander his tens of thousands upon it. He may riot within it, and fidget about it for a few brief years; he may even hang his coat of arms upon it, if he can fortunately do so without stumbling over a lapstone, or greasing his coat against the pans of a cook-shop; but it is equally sure that no child of his will occupy it after him, even if his own changeable fancy or circumstances permit him to retain it for his natural life. Such are the episodes of country house-building, and of frequent attempts at agricultural life, by those who affect it as a matter of ostentation or display. For the subjects of these we do not write. But there is something exceedingly grateful to the feelings of one of stable views in life, to look upon an estate which has long been in an individual family, still maintaining its primitive character and respectability. Some five-and-twenty years ago, when too young to have any established opinions in matters of this sort, as we were driving through one of the old farming towns in Massachusetts, about twenty miles west of Boston, we approached a comfortable, well-conditioned farm, with a tavern-house upon the high road, and several great elms standing about it. The road passed between two of the trees, and from a cross-beam, lodged across their branches, swung a large square sign, with names and dates painted upon it—the name and date we have forgotten; it was a good old Puritan name, however—in this wise:

“JOHN ENDICOTT, 1652.”

“JOHN ENDICOTT, 1695.”

"JOHN ENDICOTT, 1749."

"JOHN ENDICOTT, 1784."

"JOHN ENDICOTT, 1817."

As our eyes read over this list, we were struck with the stability of a family who for many consecutive generations had occupied, by the same name, that venerable spot, and ministered to the comfort of as many generations of travellers, and incontinently took off our hat in respect to the record of so much worth, drove our horse under the shed, had him fed, went in, and took a quiet family dinner with the civil, good tempered host, and the equally kind-mannered hostess, then in the prime of life, surrounded with a fine family of children, and heard from his own lips the history of his ancestors, from their first emigration from England—not in the Mayflower, to whose immeasurable accommodations our good New-England ancestors are so prone to refer—but in one of her early successors.

All over the old thirteen states, from Maine to Georgia, can be found agricultural estates now containing families, the descendants of those who founded them—exceptions to the general rule, we admit, of American stability of residence, but none the less gratifying to the contemplation of those who respect a deep love of home, wherever it may be found. For the moral of our episode on this subject, we cannot refrain from a description of a fine old estate which we have frequently seen, minus now the buildings, which then existed, and long since supplanted by others equally respectable and commodious, and erected by the successor of the original occupant, the late Dr. BOYLSTON, of Roxbury, who long made the farm his summer residence. The description is from an old work, "The History of the County of Worcester, in the State of Massachusetts, by the Rev. Peter Whitney, 1793:"

"Many of the houses (in Princeton,) are large and elegant. This leads to a particular mention, that in this town is the country seat of the Hon. MOSES GILL, Esq., ('Honorable' meant something in those days,) who has been from the year 1775, one of the Judges of the Court of Common Pleas for the county of Worcester, and for several years a counsellor of this commonwealth. His noble and elegant seat is about one mile and a quarter from the meeting-house, to the south. The farm contains upwards of three thousand acres. The county road from Princeton to Worcester passes through it, in front of the house, which faces to the west. The buildings stand upon the highest land of the whole farm; but it is level round about them for many rods, and then there is a very gradual descent. The land on which these buildings stand is elevated between twelve and thirteen hundred feet above the level of the sea, as the Hon. JAMES WINTHROP, Esq., informs me. The mansion house is large, being 50 by 50 feet, with four stacks of chimnies. The farm house is 40 feet by 36: In a line with this stand the coach and chaise-house, 50 feet by 36. This is joined to the barn by a shed 70 feet in length—the barn is 200 feet by 32. Very elegant fences are erected around the mansion house, the out-houses, and the garden.

"The prospect from this seat is extensive and grand, taking in a horizon to the east, of seventy miles, at least. The blue hills in Milton are discernable with the naked eye, from the windows of this superb edifice, distant not less than sixty miles; as also the waters in the harbor of Boston, at certain seasons of the year. When we view this seat, these buildings, and this farm of so many hundred acres, now under a high degree of profitable cultivation, and are told that in the year 1766 it was a perfect wilderness, we are struck with wonder, admiration and astonishment. The honorable proprietor thereof must have great satisfaction in contemplating these improvements, so extensive, made under his direction, and, I may add, by his own active industry. Judge GILL is a gentle-

man of singular vivacity and activity, and indefatigable in his endeavors to bring forward the cultivation of his lands; of great and essential service, by his example, in the employment he finds for so many persons, and in all his attempts to serve the interests of the place where he dwells, and in his acts of private munificence, and public generosity, and deserves great respect and esteem, not only from individuals, but from the town and country he has so greatly benefited, and especially by the ways in which he makes use of that vast estate wherewith a kind Providence has blessed him."

Such was the estate, and such the man who founded and enjoyed it sixty years ago; and many an equal estate, founded and occupied by equally valuable men, then existed, and still exist in all our older states; and if our private and public virtues are preserved, will ever exist in every state of our union. Such pictures, too, are forcible illustrations of the *morals* of correct building on the ample estates of many of our American planters and farmers. The mansion house, which is so graphically described, we saw but a short time before it was pulled down—then old, and hardly worth repairing, being built of wood, and of style something like this design of our own, bating the extent of veranda.

The cost of this house may be from \$5,000 to \$8,000, depending upon the material of which it is constructed, the degree of finish given to it, and the locality where it is built. All these circumstances are to be considered, and the estimates should be made by practical and experienced builders, who are competent judges in whatever appertains to it.

CONSTRUCTION OF FRUIT ROOMS—KEEPING PEARS.

THE time has now arrived when intelligent cultivators are no longer satisfied with a supply of the best fruit during the few weeks when it may be plucked fresh from the tree.

The best artificial method for prolonging the period of maturity must be ascertained; and when once reached, cannot fail to be sought with great eagerness. For it becomes a matter of no little consequence, whether the cultivator, who has expended a considerable sum to purchase, raise, and carefully cultivate a fine orchard of trees, be permitted to eat the best fruit only during two or three months of "the fruit season," or to feast on melting pears, all through a long winter, and till the fresh trusses of strawberries are reddening his garden beds the next summer. This is no chimera—it *will be done*.

The old fashioned receipt for keeping winter apples, was "to lock them in a cool cellar and hide the key." But this simple process will not answer for pears. These evaporate moisture much more rapidly than apples, which have a more impervious epidermis. Place an apple in a dry room, and it will continue plump for a long time. During the same period, a pear will become badly shrivelled.

Winter apples are usually subjected to many changes before the time comes round for them to be eaten. They are placed in a dry room, tending to evaporate their moisture; there are removed to damp cellars, where moisture is re-absorbed; changes of temperature, besides being accompanied alternately with dryness and humidity, also affect the keeping qualities by the direct action of heat and cold. It is not surprising that pears, when subjected to these changes, being much more susceptible than apples, should be found so hard to keep. This is the reason why we so often hear the complaints, "I can't keep winter pears"—or, "they wont ripen with me, they either wither, or rot, or both"—"winter pears are a humbug!"

I the best Bartlett's and Virgalieus could be taken from the tree five days before their

usual period of maturity, (as they always should be,*) and submitted to a temperature scarcely above freezing, and where no change, either in temperature or moisture could occur, they would keep an indefinite length of time—it is hard to say how long,—whether seven months or seven years—and the nearer they are made artificially to approach this condition, the longer they will keep. This, with the exclusion of light and moisture, which always tend to produce decay, constitutes all that is at present known and established, relative to the keeping of fruit in a simple unprepared state. The exclusion of air from fruit in its simple ordinary condition, is of less importance than is usually supposed, as it usually contains *within itself*, all the elements for fermentation.

In constructing a *fruit room*, therefore, the first and leading requisite is to guard against changes of temperature, that is, to exclude frost and heat. Hence, the same principles substantially must be applied, as in the erection of an ice-house—the adoption of double walls, double roof, and double doors, forming perfect non-conductors of heat.

The annexed plan exhibits, in substance, the best mode at present used for the construction of the walls and shelves. The walls are double, and may be made of brick or of matched boards—the former will be most secure from changes of heat and cold. The enclosed plate of air serves as an additional non-conductor; but as its circulation in this confined space carries the heat from one wall to another, a filling in of some porous substance to prevent this circulation, is a decided improvement. Col. WILDER is very successful with charcoal dust—saw-dust

or dried tan would be as efficacious. On each side of the room is a window, *a a*, corresponding with the two walls, so that the room may always be kept dark; each shutter is made of boards, double, or with a confined portion of air. These windows serve for cleaning and airing the room before gathering the fruit, and for ventilation in a few rare instances, when occupied. The doors, *b*, are also made double. In ordinary cases, all the ventilation required is effected by registers placed in the walls near the floor and roof. The table, *c*, at the center of the room, is used for the reception of fruit, before placing on the shelves. It is covered with cotton, or other soft substance, to prevent bruising. The shelves are divided into narrow strips, with the space of an inch between each, to facilitate the circulation of air through them. The upper ones are raised at the back, as shown in Fig. 2, that the fruit may be easily seen. All are provided with a ledge-board in front.

Marshall P. Wilder, of Boston, has given much attention to the preservation of winter pears, and has been so successful as to keep good specimens through the whole of spring into the summer months. His fruit room was at first below ground, or in other words was a *cellar*, but he found it too warm, too damp, and not well fitted for the purpose. He then adopted the opposite extreme, and constructed a fruit room over his carriage-house, having dou-

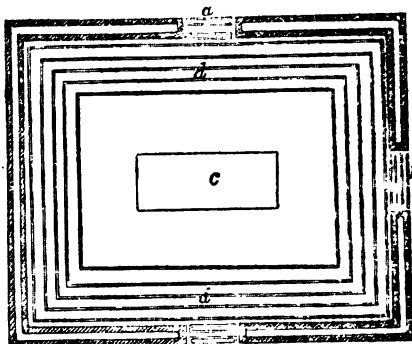


Fig. 1.

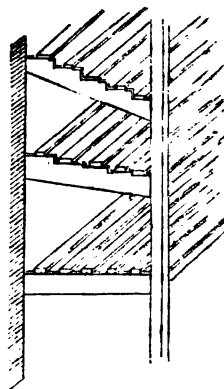


Fig. 2.

* There may be a very few exceptions—such, for example, as the *Andrews*.

ble walls, filled with powdered charcoal. The fruit is arranged on shelves, and on the approach of the severest weather of winter, it is removed and packed in boxes, with a thin layer of clean rye straw between each tier. The boxes are then placed together, and covered with hay three feet deep. JOSEPH MOORMAN, of London, has a fruit room, also over a carriage house, the walls not filled in, and perhaps in other respects not so secure from frost as would be desirable. A small stove is therefore placed in one corner, to be used when necessity demands. (It is also used for repelling moisture.) He succeeds admirably, however, in preserving an even temperature, and states that "when the weather becomes frosty, it is several days before the thermometer is affected as much as one degree." The fruit room of the London Horticultural Society, under the charge of Robert Thompson, is doubtless a more perfect structure; the double walls, eight inches apart, are filled in with dry moss, and according to the statement of H. W. Sargent in a former number of the *Horticulturist*, fire is never used, although the thermometer in open air has sunk to 5° below zero. The fruit is on open shelves. *Long continued* severe weather, as often occurs in this country, would of course be more difficult to guard against than a sudden snap.

It is obvious that artificial heat should be used with extreme caution, as it is changes of temperature and of moisture that cause speedy decay. Ventilation by opening the room to the air outside, is only to be effected when the temperature within and without are the same. Some French horticulturists have made use of the chloride of calcium* for absorbing the superabundant moisture of their fruit rooms, which entirely obviates the necessity for currents of external air, and without any change in temperature. It absorbs double its own weight of moisture, and then becomes liquid. It is placed in a shallow wooden box, so as to expose two or three superficial feet to the air, the box being open also at one corner, which being placed lowest upon a table the liquid chloride immediately drains off and runs into an earthen vessel. It may then be dried over a hot fire, and be as good as before.

The amount of moisture in different localities and situations, is no doubt quite unlike. Some cellars are much dryer than others, which is a reason that some are quite successful in keeping fruit, when others with equal care entirely fail. An important object in selecting an upper room is not however merely to avoid moisture. To secure *coolness* is the main reason—especially during the last half of autumn, when a great many winter pears are permanently injured for keeping by too much warmth. But the moisture of the air should be so regulated as never to condense upon the fruit, (kept at the same temperature,) producing what is usually termed *sweating*—nor to be so little that the fruit shall throw off its juice to the dry atmosphere, producing shrivelling. A little experience in a well constructed room would enable any one to manage this point accurately.

We should have mentioned, when speaking of the construction of the shelves, that they should be evenly covered with some soft substance, one of the best of which is hay made from the spear or June grass, (*Poa pratensis*,) which is remarkable for its softness and elasticity. The fruit should then, after being carefully assorted from all bruised or decayed specimens, and wiped dry, be placed in a single layer upon this, without touching.

It will be understood by all familiar with keeping winter pears, that when the specimens approach the usual period of maturity, they should be successively removed to a warmer room, where a few days will develop their golden color and their melting texture.

As we have already observed, the great leading requisite is a low and uniform tempera-

* Obtained by heating common chloride of lime.

ture, and exclusion from light; the fruit having the elements for fermentation within itself, the absence of air is not of great importance, under ordinary circumstances. The great success which has been found to attend packing in charcoal, sawdust, chaff, &c., is largely owing to the preservation of a uniform temperature by these non-conductors of heat, and to the exclusion of light—with occasionally the additional advantage of admitting of being placed in a *cold* and damp cellar by absorbing the surplus moisture.

All this care will, no doubt, appear to some as altogether too great for practice. But even supposing that the room and its management will cost as much as the fruit garden and its cultivation, would not doubling or tripling the period for the maturity of pears, amply repay all trouble? And, estimated by money merely, would not such a room for the marketer of the finest specimens, prove eminently profitable, by enabling him to sell his best specimens for twenty-five cents each, as has been repeatedly done both here and in Europe, for well kept rare sorts? Many thousands could be placed in a single building; and as high profits are in future to accompany the cultivation of the *very best*, it is well worth while to look at the mode that shall contribute to the *highest perfection*.

Such a room as we have described would be an admirable place for grapes, either deposited on the shelves, or (still better) suspended by wire hooks at the apex of each bunch, causing the bunches to spread and the grapes to *hang apart* and prevent rotting.

In all cases where a *cellar* is used for keeping fruit, as is usually the case with common winter apples, the evils of dampness may be much lessened by placing the shelves in the centre, (*a*, Fig. 3,) and leaving a space all around for passage. (*b. b.*) These shelves may be suspended on iron rods, at such a distance from the walls and floor that the most expert rat can never reach them by his longest leap. They may be twice as wide as usual, as they are reached from the passage on both sides.

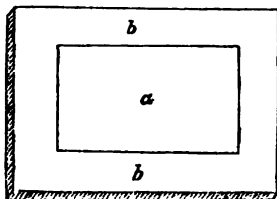


Fig. 3

CRITIQUE ON THE AUGUST HORTICULTURIST.

BY JEFFREYS.

Shade Trees in Cities.—It was fitting that the last essay of DOWNING to his readers, should be on his favorite subject of trees; and never has he talked to us more wisely, nor upon any subject can his advice be better heeded. It were useless to comment upon what has been so well and fitly spoken. If any one characteristic of good taste stood marked and prominent in the affections of our late friend, it was his deep love of the scenery of his native land, in its freshness and grandeur, clothed with its own luxuriant forest trees. He has made them classic by the graces of his pen, and taught us all to love and admire them beyond any and all others.

Had I the melancholy privilege to select the final resting place of DOWNING, it should be on the sunny breast of a hill looking out upon the Hudson, near the place of his birth and his residence. It should be where the pure waters of a bubbling spring would call out the earliest flowers of the season, and freshen the green turf beneath the sere and yellow leaves of the waning year. A group of noble forest trees should protect, with their deep shadow, a plain marble shaft bearing simply his name and age—all within a neat iron

railing. In this hallowed spot would the Blue-bird carol his first song to the returning spring, and the Redbreast chaunt his last sad wail over the departing autumn—simple, touching, beautiful. Such should be the burial place of the most accomplished Horticultural writer of his time!

The Curculio Warfare—a Successful Battle.(?)—"Don't shout till you are out of the woods," my friend. Try it another year or two, and see if you remain successful. We have already been told in these columns, by those who have tried it, that whitewash amounts to but little in preventing the ravages of this pest, and I am more than half of that opinion. Still, we are inclined to heed your experience with all due respect, and hope that it may prove successful hereafter.

Notes on Forty-four Varieties of Strawberries.—Enough, in all conscience. Yet it is well to "try all things, and hold fast unto that which is good." For a venture, I will select out from this forty-four, the following four kinds—leaving out the forty—and those who choose may further experiment with the others: Burr's New Pine, Hovey's Seedling, Large Early Scarlet, and Rival Hudson. These comprise the *earliest, largest, highest flavored, and latest* kinds we have, *for ordinary cultivation*, and are enough for any one family supply, or for any one man to grow for the markets. Yet a substitution of others for some of these may be better for some localities.

Mr. PARDEE is entitled to our thanks for his zeal and perseverance in thus testing so many varieties, and favoring us with his opinions of their value. Some of them may, for certain soils, excel those I have selected; others may better please the taste of amateurs; and no doubt, others yet, which Mr. PARDEE mentions in favorable terms, may be equal, possibly excel in excellence, the four varieties which are our choice. Enough has been discovered to show that an almost infinite variety of good strawberries can be produced from the seeds of the best we now have in cultivation.

Strawberries and their Nutrition.—The thanks of every strawberry grower are due to Doctor HULL for this very scientific, practical, and able article. It speaks for itself; and, together with the editorial remarks, will be read with marked attention by every one interested in the subject. There are some positions in it which may be doubted in some parts of our country; but even there, sound instruction may be received from the particularity of cultivation, and the method of applying the special manures which have been used. Every one *cannot afford* to grow strawberries as Dr. HULL has grown them, even without his application of special stimulants; yet all who grow them for their own tables can afford to cultivate them well, and to provide that aliment which will develop their best qualities.

Fifteen or twenty years ago, good table strawberries, with most people, were scarcely known, and among those who did know them, the Chilis, Alpines, and a few poor things, both in bearing and flavor, were all that could be found. Now the country housekeeper, with a garden of his own, who cannot, for three months in the summer, furnish his table three times a day, if necessary, with any quantity of the best of strawberries, is considered far behind the times, in any intelligent neighborhood. They are, in fact, as easily produced as tomatoes.

There is one thing, however, against which I must protest, in the zeal to produce large strawberries. These overgrown, highly stimulated fruits of *any kind*, are, and must be, from the very nature of things, deficient in flavor. There is no fruit we cultivate which produces so much weight of flesh in proportion to its stem and root as the strawberry. It can furnish but a given amount of its own specific flavor, *according to the size of the plant*, to the fruit it may bear. All beyond that given amount of flavor must, of course, be

simply water, and perhaps badly tarted at that, partaking largely of the properties of the stimulant from which its size is made. The experience of every one who remarks it must agree to this assertion, and for high flavor, and the real excellence of the fruit, it is not desirable to cultivate overgrown specimens, or to get them much beyond their natural size. The field strawberry—and of these there are many varieties—when grown in good localities, are acknowledged to be the highest flavored known; and this flavor is acquired by letting nature take its own course, and perfect the fruit in its own way. Not that I would advocate the field strawberry as superior to others, but merely to illustrate, that beyond a certain point nature will not be *forced* into the full and complete development of her bounties.

Of the virtues of *tannic acid*, it may still remain a doubtful point whether it is of any real benefit beyond the very convenient and excellent quality it has as a *mulch* for the strawberry. Field strawberries certainly get nothing of it beyond the rotten wood and decayed leaves which sometimes reach them in their chance localities. That the *tan-bark* keeps them clean, and protects them from frost and drouth, is certain, and therefore it may be fully used—(*spent tan*) but beyond this, good *old fashioned* manures and stimulants, in soil not naturally rich, are indispensable.

Illinois Horticulture, Insects, Professor Turner, &c.—Doctor KENNICOTT is always running over with good things. This very narrative of his makes one almost jump out on a start for the western prairies, where he can “throw himself” into all liberty of action, phase of thought, and extent of imagination. The Great West! Who can comprehend it, in its vast outline, its inexhaustible luxuriance of soil, its far stretching interminable streams, its grandeur of vegetation, its boundless scope, its healthful climate—its energetic, enterprising, full-souled people! A century hence—and what must it be? With its railways, its commerce, its cities, its farms, orchards, gardens, and, beyond all, its population. Well did Bishop BERKLEY look with prophetic vision when he wrote:

“Time’s noblest Empire is the *last*.”

A Talk about Pigs.—Mr. ALLEN seems to be associating himself largely with the aristocracy—in the way of farm stock, and he is right. When such gentlemen as these he names and alludes to, show such examples of liberality and public spirit in the introduction of improved stock to the farmers of our country, it must remain to the lasting disgrace of such farmers if they do not acknowledge the benefit they receive from it, and reward such benefactors to their interests in a liberal purchase of their animals.

New Hardy Cherries.—Good. We want fruits adapted to every extremity of climate and soil in our country, and good fruits too. These new varieties of the different kinds, as we occasionally find them from the productions of our enterprising pomologists, are significant of the fact that we can produce the required varieties to supply all our demands. It is to be hoped that these new cherries of Mr. KIRTLAND, will do good service to the public.

Large Trees in the State of New-York.—“It is much to be regretted, indeed, that we have no chronicles of the grand old forest giants that have long been passing away from among us. But for the occasional trunks which still remain as monuments of past ages in some sections of the country, the dimensions of such enormous trees would seem almost fabulous. I have seen many an one of these

“last of a mighty line,”

in my own wanderings, and never gazed upon their immense stems and hoary branches without a feeling of profound reverence, at the majesty which had thus braved the storms of a thousand years. Every man whose good fortune it is to own the soil on which one

of those valuable relics remain, should consider it a religious duty to protect it while he lives, and to enjoin upon his successors in possession of the estate to cherish it after him. In after days these time-honored monuments will become the vegetable "Meccas" of our land, to receive the homage of many a "pilgrim" in the walks of arboriculture.

Climate of San Francisco.—Among the interludes of gold hunting, lynch-law, burning towns, and speculations in the far away Eldorado of California, we get an occasional glimpse of its climate and soil, and its agricultural and horticultural resources. These indicate a more favorable character, as the inhabitants begin to get acquainted with them, than at first; and when the pursuits of the people once get settled, and the several divisions of labor work into their appropriate spheres, as they probably will in due time, California, in its fertile valleys, hills, and plains, may become a productive region in most of the useful grains and fruits with which we are acquainted. Its agriculture, if we are to believe the accounts of many of their farming achievements, is wonderfully remunerative—quite as much so as gold digging. A substantial agricultural interest must be planted there before California can become a wholesome state, either in morals or permanent prosperity. But in the excitable, adventurous emigration which constantly flows upon it from the older states, but a small portion can be expected to settle down into the quiet pursuit of agriculture, and it will probably be many years before a regular system of husbandry will be established sufficient to give stability to its productions, or to support a large population. For many years, therefore, those who cultivate the soil with patience and industry, will reap large rewards for the capital and labor invested in agriculture.

Country Seats about Boston.—*De gustibus non disputandum.* Why, gentlemen, each, all, and every one of the charming country seats you talk about, are fine places, in their way. No matter whether a residence and grounds occupy a site on a hill, a plain, or in a valley, so that it be properly built, arranged, and planted, it may be equally beautiful and attractive. Individual variety in such things is what makes the whole, taken collectively, beautiful. Variety of surface demands variety in buildings and in the formation of the grounds around them. How monotonous would look a range of villas and grounds, plantations and gardens, all after one pattern! A small enclosure, beside an extensive one; a cottage, in the neighborhood of a palace; a wood near an open field; a highly cultivated garden with its flowers and shrubbery, protected by the adjoining forest of large and stately trees—all give variety, character, and completeness to the landscape, which the dull monotony of like things would fail to do, and thus a country, uninteresting in itself, as the neighborhood of Boston would be in its natural state, becomes one of the most enchanting character, by the diversity of art and taste which is exercised in its embellishment. I wish every city in the United States was half as well environed, in its country places, as Boston. We should be far in advance of what we now are.

JEFFREYS.

NOTES ON STRAWBERRIES.

BY G. W. HUNTSMAN, FLUSHING, N. Y.

It is desirable, now that so many new seedlings are coming into notice, to define, if possible, what qualities are the most desirable. Those which I consider as constituting a perfect strawberry, are the following:

1. A vigorous and hardy plant—capable of bearing alike our summers' sun and winters' frost.

2. Productive—giving uniformly a good crop of fruit under ordinarily kind treatment.
3. Having strong trusses, of sufficient length to keep the fruit from the ground.
4. Fruit uniformly large, of a regular conical shape.
5. Flesh solid, rich and juicy—of a sprightly or luscious flavor.
6. Color—bright scarlet or crimson—one that will not become dull on exposure

Color may not seem to be of much importance—but as a quality of fruit for market, it becomes a matter of great consideration. I have found that generally, the light scarlets retain best their bright appearance. The Early Scarlet and British Queen possess beautiful colors, which do not change much after being kept for some time. Hovey's Seedling is much at fault as regards color; after being exposed, its color becomes so dull as to induce the belief that the fruit is stale. If a plant could be produced, having the vigor, hardiness, and productiveness of Hovey's Seedling, with the fruit of the British Queen, it would very nearly realise my ideas of a perfect strawberry. That such a plant will be produced, I have very little doubt.

The following notes were made during the fruiting season. Though not very full, they may still be of some interest. In many cases the plants were only put out last autumn, and consequently did not exhibit fully their qualities.

McAvoy's Superior—Vigorous and productive—fruit large, rich and juicy. One of our very best varieties, though it will not, I think, quite equal Hovey's in size, but then it is much superior in quality.

Burr's New Pine—Not quite so vigorous or productive as some other varieties.

Richardson's Seedlings—Not sufficiently productive to merit much attention.

Moyamensing Pine—Plants very vigorous and productive—fruit, medium size—flavor, about equal to Buist's Prize. Not superior to Hovey's Seedling.

Huntsman's Pistillate—One of the most productive varieties—fruit, large and beautiful—flavor, very indifferent.

Willey—Productive, but too acid.

The following are new seedlings raised by Mr. WM. R. PRINCE. H. indicates hermaphrodite—P. pistillate.

Primate—(H.) Very productive—fruit large—about equal in flavor to Hovey's Seedling.

Superlative—(P.) A seedling of Burr's New Pine. About equal in size and flavor to its parent. Plants grow more vigorously—probably more productive than Burr's New Pine.

Triumph—(H.) Resembles the large Early Scarlet, both in color and flavor—but of twice the size. Very productive. Fruit borne on strong trusses. If of vigorous growth, it will be one of the most valuable varieties for market.

Prince's Imperial Scarlet—(P.) Fruit large, light scarlet, and of excellent flavor—a very promising variety. Another season will test its value.

The following six varieties are seedlings of the Swainstone:

Twice Bearing Swainstone—(P.) Very productive—early, of medium size—about equal in flavor to Hovey's Seedling. Said to bear a second crop in September.

Sylphide, Monstrous Swainstone, Maximus Swainstone and Le Baron, are all hermaphrodite plants of great vigor—moderately or quite productive—fruit large, and of delicious flavor. Of these, the Le Baron is probably the best; fruit nearly or quite as large as Hovey's, and of the exquisite flavor of the Swainstone—the most desirable hermaphrodite that I have yet seen, though I have not yet seen Mr. Longworth's Prolific, or Schneike's hermaphrodite, which are said to be varieties of great excellence.

Climax—(P.) Plants very vigorous—fruit of a larger average size than any other variety that I have seen; of a beautiful light scarlet color, but not of first quality as regards flavor. May be a good market fruit.

G. W. HUNTSMAN.

Flushing, L. I., August 1, 1892.

LAYING OUT GROUNDS OF MODERATE EXTENT.

BY B. M., NEW-YORK.

WE know that many individuals fancy that there is not much to learn on this subject: on the contrary, that "every one knows how he likes to have his place done," and that as it is "all a matter of taste," each one can follow his own.

It is perfectly true that it is "a matter of taste," and this is the very fact which involves in it the mistake which those fall into, who have never given their attention to the study of landscape scenery; not in its native grandeur only, but as combined with, and made subservient to the conventionalities of art. The mistake consists in supposing that persons who have formed a general notion of what they wish done, cannot be assisted in the development and carrying out of their own desires and wishes, by the landscape gardener.

A little reflection will, nevertheless, satisfy the most skeptical that there is error in such a conclusion. Let any one recall to memory his primitive ideas upon subjects which he has subsequently studied, and in which he has attained proficiency, and compare them with his matured judgment, and he will be at no difficulty in arriving at the conclusion that his first ideas were crude and incomplete, if not positively erroneous. What he had regarded as perfection, or at least as a degree of excellence which would, at the outset, have gratified his every want, will, with his improved acquaintance with the subject, appear to his mind wholly inadequate to his present requirements.

The reason of this is obvious. However alive we may be to the perfection of beauty, whether in nature or art, our perceptive faculties in the exercise, admit of culture which augments our powers of enjoyment. That, therefore, which satisfied him in the first instance, ceases to do so, when, by greater familiarity with the subject under consideration, we become more conscious of the capabilities of our nature, to derive from its higher cultivation, an increased measure of those pleasurable sensations in which our enjoyment, or in other words, the reception of impressions agreeable, whether to our senses or our mental faculties, consists.

Again, let a man travel through miles upon miles of an unreclaimed country, where there is but little diversity of scenery; where no massive rocks arouse the imaginative powers by their sublimity, and where the absence of water leaves nothing for the weary eye of the wayfarer to rest upon, but the arid ruggedness of barren waste. Let him then come to some favored spot, where the hand of man has raised an oasis in this desert. With what rapture is the first glance of the eager eye cast wistfully around, almost doubting whether the welcome sight is visionary or real! Why is this? Because that man's taste has been educated—has learnt to distinguish between the rough features of nature's most rustic garb, and the grateful smile which she puts on under the fostering hand of man. In other words, he has unconsciously learnt part of that endless, but never fruitless lesson, taught by industry, that not only are our wants supplied, but our innocent pleasures are

even amply gratified, in return for the diligent use of those means which a merciful providence has placed within the reach of all.

And thus will it ever be found in reference to the study of the beautiful in nature, and the adaptation of her wilds and wildernesses to our present uses. The more we become practically acquainted with the associations of country life, the more shall we become sensible of the numberless instances in which rough untouched grounds admit of being accommodated by the experienced eye, to the immediate wants and requirements of the elegancies of domestic life, and this, very frequently, by simple, although most effective, because judiciously directed means.

The first thing to be done in setting about to lay out grounds of moderate extent, is to take a survey of the whole, and determine upon the situation for the house or villa, assuming that it is not already erected. In doing this, one of the chief considerations should be the aspect, and its situation as regards elevation. This, to be judiciously decided upon, must depend not only upon the greater or less extent of the grounds, and their even surface or the contrary, but also upon the nature of the surrounding localities; for instance, the presence or absence of river, lake, or any considerable expanse of water, or of mountainous, or less elevated scenery in the vicinity. More cannot, therefore, be said upon that point, (within our limited space,) than that due regard should be had to these accidents of situation, so as to take advantage of the surrounding scenery, and so to place the residence that it should command an extensive, and at the same time as varied a view, as may be.

The situation for the house being determined upon, the general plan of the whole ground has to be arranged. Of course, any domestic offices and out-houses, such as stables, wood house, poultry house, &c., should be placed in the rear of the dwelling house, and be concealed from sight by a small plantation of trees, and by the kitchen garden, taking care, in the position of the latter, that a favorable aspect is obtained for it, with a southern exposure as nearly as possible.

The general effect now to be given to the whole, will mainly depend upon two circumstances; the one the distribution of the trees and shrubs, and the other, the nature of the surface. The most favorable ground for landscape gardening, is that which is uneven—presenting an undulating surface, and if with mounds and elevations at some parts, or with a gentle ascent of a considerable portion of it in another direction, so much the better. The distant scenery should be glanced over, with a view to endeavor to bring it in, by opening its most picturesque portions. The removal of a few trees at intervals, will often effect this, taking care in so doing, that such only are cut down, as are not essential to the home scenery—and only removing sufficient to obtain the view, without exposing the privacy of the residence.

If in the distant landscape a view of water can be brought in, nothing adds more, and few things so much, to the general effect. In the introduction of the distant scenery, care should be taken to avoid opening to view those parts of it which may not offer agreeable features; and unless the scene of operations be on an elevated situation, it is generally expedient to avoid the exposure of a great breadth of flat country, unless bounded by distant hills. Then, again, the question of what parts of the outer scenery are to be opened upon, must, in many instances, be regulated by that within the grounds. If, for instance, there happens to be within the grounds a considerable plantation of dense foliage, which it is desirable to retain for the purpose of shelter, or for any particular reason, a fine effect will usually result from cutting through it a small opening, by which a pleasing glance is caught of the distant view. By such means the sombreness of the mass in its

effect upon home scenery, is much relieved. Another effect of striking elegance is produced, if, in exposing the distant landscape to the grounds, it can be so done that any fine, noble tree, (or group of two or three trees,) upon them, can be left standing, mid-way, as it were, between the observer and the outer landscape; whether the tree or group is so placed as to be presented to the eye at the side or center of the general view, is of little moment. Few who recall to mind the magnificent effects produced by many of the great landscape painters, by placing a tree in the foreground of their paintings, will fail to appreciate readily the value of such an addition to the landscape. And although it may be expedient to get one pretty extensive view of distant objects, assuming them, in character, to present pleasing associations, it should always be borne in mind that more ornament and variety are given to the general effect, (and particularly to the home scenery,) by opening the distant prospect at several distinct points of view from the grounds, than by exposing from one point a great extent of distant objects, by the sweeping destruction of intervening foliage.

The distance having been called into requisition to the limit of its capability, the home scenery must next be attended to—by which is meant the laying out those parts of the ground not intended for garden culture, or required for domestic purposes. And it is here that a small expenditure judiciously laid out by the landscape gardener, admits of the production of great results; whilst unfortunately the practiced eye too often sees that it is here, more than in any other particular, that large sums of money are expended frequently in *taking from*, instead of *adding to*, the rural beauty of the grounds.

If it is wished to retain, (as it is generally expedient to do,) a part of the grounds immediately in front and adjacent to the house, as lawn, turf, or pleasure ground, that portion, (be it greater or less, according to the wish of the proprietor,) should be marked off, and should be surrounded either by a fence or ditch. If the former, it is best that it should be of light iron, or wire, so that it may be as invisible as may be, but if of wood, as light, rustic, and elegant as possible; and it should be painted dark green, or some dark, in preference to any light color. If a ditch, it should not be less than four feet wide, and the earth dug out in making it should be thrown up and made to form an embankment on the homestead side. In case it is intended to plant the part so enclosed, with ornamental trees and shrubs, it must be cleared from all brush and under-wood, and also from the greater portion of the larger trees, leaving, however, here and there, one of them, to form a contrast to the effects of art culture.

The treatment of the grounds outside this home fence, requires a more extended notice. In the first place, supposing the ground to be hilly and uneven, above all things avoid the prevailing error of setting to work to level it. It may be necessary in particular places, and in some parts of many places, to expend some time and money in this use of the spade and wheelbarrow; but, three times out of four, this is done to the positive injury of the place, as it undoubtedly is usually to the pecuniary loss of the proprietor, and this to an amount frequently far greater than the whole of his other out door expenditure. Time out of time have we seen more money expended in moving earth upon a place, than would have served to cover the cost of altering the grounds from a rough state, into first rate order, if it had been laid out by a skilful landscape gardener, whose fee would but have amounted to something like a merchant's commission upon the sum that would have been saved.

Instead of looking round, therefore, to see how the ground can be levelled, look at the positions occupied by the principal eminences of it, and then see whether they obstruct the view of any desirable object—or if by their proximity to the residence, or otherwise,

they interfere with the general arrangement; in the latter case it may be necessary to remove them, or to reduce their size, but if not they will usually add to the beauties of the place. If at a considerable distance from the house, a group of trees upon the top or sides of such eminences, will form a pleasing object, but on elevated spots nearer to the villa, a single tree or two will usually be more effective. Wherever water is present in the grounds, unless it be an artificial basin surrounded by a lawn of well kept turf, it is desirable that a greater or less quantity of trees and shrubs should ornament its banks. A broken foliage of diversified bright clear water, will be found more efficient than a belt of even hedge row; and when a pond or small lake, it is seldom expedient that it should extend around the whole area of it.

Throughout the grounds, some large trees which have attained, or which are approaching to, maturity of growth, so as to have become single objects of beauty, should be left standing, to give boldness to the whole, and as a principal means of insuring variety to the landscape, as the spectator views it from the different points. In the selection of these, attention should be given to retain a diversity of foliage. Around the sides of the ground groups of trees of greater or less extent, should be left, not only for shelter, but to afford a degree of outline to the premises—and before these should be left or planted shrubs and foliage of moderate growth, to act both as a fence, and to form a foreground to them.

In this mode of adapting the refinement of landscape gardening to the requirement of places of moderate extent, the beauties brought into observation by it in no way interfere with the employment of the land for the more profitable purposes of farming, or as productive of the usual domestic enjoyments associated with country life. The features of the rural landscape having been secured by the general treatment above indicated; and the private pleasure grounds, gardens, and poultry yard, having been protected by fences, in the mode pointed out, the whole of the land may be adapted to such branches of husbandry and farming, as the proprietor may desire. The cows and the sheep may range over the pasture, and he may cultivate any crops he pleases. All that it has been sought to do, is in the first start to secure on the one hand, a large share of rural beauty to the grounds, (and which, in three or four years will, by-the-bye, add in no small degree to the value of the property,) and on the other, to save the owner from throwing away a large sum of money in what he erroneously considers to be a necessary expense "to make the place decent," whilst in reality, he expends it only in destroying beauties which one-third of the sum would draw forth and portray in all the sublimity of effect for which nature has already fitted them.

In such an arrangement of ground as we have thus hastily sketched, if the parts of it brought into culture for corn, or other tilled crops, be confined to the rear of the residence, and the other parts are devoted to pasturage for sheep or cattle, an air of park-like appearance will be presented by the whole place, whilst, as we have before remarked, its profitable and productive character will not be interfered with. A few evergreens, both trees and shrubs, distributed here and there, will materially add to the general effect, and these may often be found already growing. The road of approach to the front of the house, as well as the paths through the pleasure grounds, should be formed in greater or less curved lines, and never, (except in very extensive grounds,) in straight lines. The plantations of small shrubberies on either side of the house, (unless on one side it opens upon the garden,) will also much influence the beauty of the whole. But our object has been rather to direct attention to the material features of the general plan, than to particularise the detail of minor points.

B. M.

ON THE CULTURE OF SEA KALE.

BY AMERICUS, NEW-YORK.

ALTHOUGH we have such a variety of vegetables, that it may seem superfluous to press upon the public the good qualities of one at present but little in use; yet seeing that it is only from want of its being better known, that sea kale fails to be fully appreciated, I think all who try its cultivation will feel obliged to the Horticulturist for bringing this excellent vegetable into notice.

In quality it takes its stand with asparagus, but has the advantage, with but little trouble, of being available for the table some weeks earlier; and the beds of sea kale, like those of asparagus, when once made, last for years.

If plants can be purchased, a year is saved, but if they cannot, the seed may be sown either in October, or in April, as early as the ground can be worked. The seed should be sown in drills, and when up, as soon as the plants are two inches high, they should be thinned out to about four inches apart; so let them stand, if sown in the fall, until spring, covering them during the winter with straw or other litter loosely, or what is better, with a frame and glass lights. In April put out the young plants in a fresh, dry, piece of rich ground, about a foot apart, and let them stand, keeping them hoed occasionally until October, when, of course, they will be a year old, and these are the best plants with which to make up the permanent bed; but plants sown in April, transplanted when three inches high, as directed for the fall sown, and hoed till October, will do. The beginning of October, or any time between that and the setting in of hard weather, the permanent beds may be planted, and this must be done with some care.

First, trench a piece of ground the size that it is intended to make the beds, laying some good rotten manure at bottom, (though it may be coarse, rough stuff,) and if there be some ashes made from burnt weeds, or refuse wood and bones, thrown in with it, all the better. If the situation be at all wet during the winter months, trenches must be dug or the beds thrown up, so as to drain off. Take the plants from the nursery bed and sort them, so that those of a size may be planted together, which operation must be performed as follows: The bed to be planted should be marked off into squares three feet each way, and at the intersections of the lines forming the squares, three plants should be put in triangularly, at the distance of eight inches apart, so as to form a hill. Thus, when planted, the bed will consist of hills three feet distant from each other every way, and three plants in each hill. The object of sorting the plants in sizes, is to have plants of equal strength growing together in each hill, so that they may all be ready to cut at the same time. The bed being planted, nothing more requires to be done until signs appear of the setting in of frost. About the time when the cold weather commences, the leaves of the kale will die away, and then they should be cleared off the bed, and a thick covering of some material must be put over the beds. Some rough manure should always be put on to the thickness of three or four inches, at least, and if this material is in plenty, nothing is better for the whole covering; but if otherwise, leaves, sea weed, tan bark, or black bog earth will do. Whatever it may be, should be laid on a foot thick, or more, and thus remain through the winter.

When the plants have remained in this state for some four or five weeks, remove the covering carefully from one or two of the hills to see whether they have commenced growing; if so the shoots will be found an inch or more long, looking much like blanched

celery; and as soon as these shoots get to be from four to six inches long, the cutting of the bed for use may commence. The plants will continue to push into the material which covers them, and it is whilst they are so doing that they are in perfection for the table.

Of course the time from which the cutting commences in the ordinary mode of culture above detailed, will depend upon the greater or less severity of the weather after the bed is covered over; but if it is wished to bring the bed into bearing at an earlier date, that can readily be done by a very simple method of forcing, which is not attended by the trouble and constant care and watching required in forcing most other vegetables. The mode of forcing is this: When about to put on the winter covering, if it is intended to force the bed, before doing so, take some large sized flower pots, or some old barrels cut in half, or old boxes, and invert one over each hill of plants, then cover the bed as usual over the pots or boxes. Whenever it is wished to bring the bed into bearing remove the material around each hill, and in its place throw some fresh or half rotten stable manure upon the boxes, and in a few days the slight fermentation from it will heat the air within them, and the plants will shoot very rapidly.

In cutting the kale, care should be taken not to cut it too close to the crown of the plants, or the product will be injured the following year. When the plants shoot up for bloom, the cutting must be discontinued, and all the covering material, except the manure, removed from the beds. The manure should then be just turned into the top of the bed, and a little salt may with advantage be sprinkled over the beds, which should be kept clear from weeds through the summer, and the growth of the plants encouraged by hoeing round the hills occasionally, as upon their vigor depends the size of the roots, and the consequent strength of growth of the shoots the following season. The beds should also be dug over every year between the hills, but great care should be taken in so doing, not to go too near the plants so as to disturb their position and the mass of roots immediately around them. If stable manure is used as the covering material in winter in any considerable quantity, that will keep up the condition of the beds in good bearing order, but if other materials are used for the winter covering, then some manure should be put in when the beds are dug over every year.

Where expense and labor are not regarded, and it is wished to prolong the season for this delicious vegetable, some of the large plants in a bed, two or three years old, may, before winter sets in, be taken up with large balls of earth and placed close together in a garden frame, which may then be covered over with boards, taking care to leave a space of 12 or 14 inches between the crown of the roots and the top of the frame; then by heaping fresh stable manure upon and round the frame, the process of forcing will be very much accelerated. Another mode often adopted where a hot-house is kept, is to put a hill of old plants in a box and force near the flues; of course covering the crown of the plants with a flower pot to exclude the light in order to blanch the shoots as they push forth.

This vegetable is cooked and eaten exactly like asparagus.

AMERICUS.

New-York, September 10, 1868.

Tributes to the Memory of Mr. Downing.

THE following beautiful tribute to the late editor of *The Horticulturist*, written by one of its correspondents, HENRY F. FRENCH, Esq., of Exeter, N. H., is copied from the *Home Journal*:

Poor Downing is dead. In the dreadful calamity on the Hudson, which brought death to so many and sorrow to the hearts of thousands more, he, whose name is associated with all that is fresh and beautiful in nature—with the starting grass and fragrant blossoms of spring-time—with the rustling leaves and waving branches of summer—with the clustering fruits and yellow harvest of autumn—has perished from the glad and beautiful earth; how much more glad and beautiful because of the life of him who has just passed away.

He who, as a prophet, inspired with the very genius of *The Beautiful*, taught us not only the eternal principles of taste, and thus enabled our judgments to appreciate its true manifestations, but also infused into our hearts a genuine love for what is lovely—giving to the eye a new light in the glancing of the moonlit water, and in the rainbow-hue of every dew-drop of the morning—giving to the ear new music, as well in the solemn rustling of the tempest-stricken forest, as in the gentle murmuring of the zephyr through our latticed bower; he who, by his teachings, thus awakened in us a new life, and so brought us more nearly into harmony with the great Author and Architect of all, has gone out from among us.

He who, as a wise and gentle brother, has "taken sweet counsel" with us, in arranging the "surroundings" of our pleasant rural homes, in the position of every group of trees and every flowering shrub that ornaments the lawn; he who kindly sat with us, and carefully "counted the cost" of our dwelling, planning with singular combination of knowledge and taste, the various conveniences and luxuries of life showing how far more necessary is a nice perception of fitness and harmony to right enjoyment, than abundant riches; he who has gilded the "refined gold" of the wealthy, by working it out into what has been expressively termed the "frozen music" of architecture, and at the same time has "painted the lily" and thrown "a perfume on the violet" for the poor and lowly, by enlightening their minds and filling them with new perceptions; he, our master and our friend, suddenly is "blotted from the things that be."

And yet how little of such a man can die. To his family, to his immediate circle of personal friends, and those who met him in the daily walks of life, it is indeed death, in all its dread reality. With them, "each heart know-

eth his own bitterness," and with their sorrow "the stranger intermeddleth not." But to us, who chiefly knew him through his written teachings, and have him still with us in the pages of his "Landscape Gardening," "Cottage Residences," and "Country Houses," in his "Fruits and Fruit Trees," and "The Horticulturist"—to us, to the world, to posterity, *he still lives.*

We mourn for one who, in his department of knowledge, stood confessedly above any other on this whole continent—a man who came to us, not like most great minds, too early to be appreciated or even recognised, or too late to be useful, but who came and was welcomed just when the inhabitants of this western world had laid down the woodman's axe, and were anxiously waiting for lessons which should enable them to advance from the stern and rigid principles of mere utility, to the higher and more graceful pursuits of science and of art—from the rude cabin of the settler, to the vine-sheltered cottage or more lofty dwelling of the artist and the scholar. This man, we are told, *is dead*; but still he stands forth, for us, pre-eminent as if yet among the living, patiently, as heretofore, in his written words, replying again and again to our inquiry, How shall we make the earth more beautiful, and humanity more pure?

Philosophy has suggested that the impress of objects perceived by what we term *sight*, is constantly repeated, projected, again and again, into space, travelling with the rapidity of light, to be intercepted, perchance, thousands of years hence, by the refined senses of mortals even, translated to distant spheres; and that nothing, whether it be a material atom, a note of music, or the reflected image of a flower, which has once *been*, can ever cease to be. The thought, however fanciful, is pleasing in connection with the memory of one whose life has been successfully devoted to the creation of beauty all around. How these daguerreotypes may have filled all space, and eternity itself, with his beautiful creations!

And now the trite question, usually so easily answered when one has gone, who occupied a large space in the public mind, will be heard, "Who shall fill his place?" The answer to this inquiry has already been suggested: *His place is already filled.* The niche in Fame's Temple for him who should develop a new world in the pursuits of "Rural life and Rural Taste" in America, like that for the discoverer of a continent, can contain *but one statue.*

In early manhood he has fallen, but not, indeed, before he had finished a *life-work*, and we who lament what seems, at first, his untimely fate, should remember that *true life* is not measured by vibrations of the pendulum, and that

"his life is long which answers life's great end," whether it be drawn out to three score years and ten, or ended, like his, when scarcely half those years have passed away.

And now, what eulogy for the dead? what monument to the memory of our friend departed? *This work is also finished.* Throughout the length and breadth of our country, wherever the air is fragrant with the perfume of cherished flowers, or murmurs through cultivated groves and gardens, it breathes the praises of him whose spirit more than any other, has refined the taste, and whose knowledge guided the hand of the cultivator; and the winds which sweep over our forests,—"those grand old woods" of oak and pine, and hemlock—already celebrate the fame of him who boldly asserted their right to the first rank in the world's catalogue of the majestic works of nature. His monument! Is it not already on every hill-top, and in every valley, in every town and every village, where Gothic art expresses, with its vertical lines, in lofty towers and pointed arches, aspiring Hope, and all embracing love—where the encircling, over-spreading, all uniting dome of Roman architecture illustrates, in public halls and capitols, the sentiments of patriotism and unity?

He has, indeed, "erected a monument more enduring than brass." His memory! Is it not already beautifully entwined with the vine that encircles the stately columns on the banks of our noble rivers, or hangs from the humble porch of the tree-sheltered cottage? Who among us has built him a house, or planted a vineyard, or reared a rare flower, uninfluenced by his taste? Who, in town or country, does not cherish an abiding sentiment of gratitude and love towards one whose life it was to refine and elevate the hearts of men, turning them from gain and worldliness, to the appreciation of the beautiful in the works of Him who has not in vain, for his creatures, spread out the landscape, and made the woods vocal, and the air fragrant? No; of all who have thus suddenly perished,

"He will not float upon his watery bier
Unwept."

With no desire to sketch his every-day life, or coldly to analyze his character as an author or an artist, but under the first impulse of the mingled feelings of sadness, of affection, of bereavement, which must find a wide sympathy throughout our country, as his melancholy fate becomes known, this notice of our departed friend has been written.

"HEAVEN KEEP HIS MEMORY GREEN."

Cincinnati Hort. Society.

On Saturday, July 31, at the opening of the meeting, the President arose and announced to the Society that the telegraphic account of the

loss of the steamboat Henry Clay, on the North River, contained a report of the death of A. J. Downing, Editor of the Horticulturist, the friend of horticultural science in the United States. Members expressed an earnest hope that there might be a mistake in the telegraph, even though it were hoping against hope.

Mr. Heaven moved that R. Buchanan, A. H. Ernst, and S. Mosher, be appointed a committee to draft resolutions expressive of the deep sympathy felt by our Society in the supposed loss of this eminent friend of horticulture; and in the hope that we may have been misinformed, to withhold their report to next week. A general gloom pervaded the Society, every man feeling that he had lost a friend.

At the next meeting the committee rendered the following report, which was silently adopted by the Society:

The sad intelligence of the loss of the steamer Henry Clay on the Hudson river, causing the untimely death of a great number of our friends and fellow-citizens, has been confirmed. Among the lost, we are called upon to lament the death of our distinguished and zealous fellow-laborer in the cause of horticultural science and rural taste, A. J. Downing, of Newburgh, New-York, editor of the Horticulturist, and corresponding member of this Society: therefore,

Resolved, By the Cincinnati Horticultural Society, that in his death we have lost a most valuable friend and contributor to the cause in which we are engaged, and that the country has to deplore one of its most valuable promoters of refinement in rural taste.

Resolved, That we sympathize sincerely with his family and friends in the deep affliction and bereavement which it has pleased the Almighty disposer of events to visit upon them in so untimely and unexpected a manner.

Resolved, That a copy of the foregoing preamble and resolutions be forwarded to the bereaved wife and family of the deceased.

The following resolution was offered by Richard Davis, seconded by M. Kelly, at a late meeting:

Resolved, That the members of this Society and horticulturists generally, be solicited to raise a subscription for the purpose of erecting a monument to the memory of A. J. Downing, Esq.

It was next moved by Mr. Ives that a committee of three be appointed to carry out the spirit of the foregoing resolution. Messrs. Hatch, Kelly and Warder were appointed.

Notices of Societies.

Pomological Congress at Philadelphia.

The fourth Pomological Congress, which assembled at Philadelphia on the 18th ult., and continued in session two days, was in several particulars a most interesting session. Its most important movement was the adoption of a constitution, under the title of the **AMERICAN POMOLOGICAL SOCIETY**. Delegates were in attendance from nearly all the Atlantic states, and from several of the Western, and they comprised, evidently, the chief pomological talent and experience of the country. The collections of fruits were very extensive—as a proof we may state, that in a hasty glance among the tables of pears, we observed 200 varieties from M. P. Wilder, 135 from Parsons & Co., 128 from B. V. French, 122 from J. S. Cabot, 140 from Ellwanger & Barry, 100 or more from Wm. Reid, 108 from Thomas Hancock, besides many other collections nearly as large. These included some specimens of much interest, and others of extraordinary beauty and fine growth. On the whole, the Congress was a very satisfactory one, with the exception of too short a time, (only two days,) allowed for its deliberations.

The provisions of the constitution were, biennial meetings—a president, and vice-presidents from each state, territory, or province represented—a treasurer and three secretaries—executive committee of five members—a standing fruit committee of five members in each state or territory, with a general chairman—a standing committee for native fruits, another for foreign fruits, and a third on synonyms, each consisting of seven members, and an admission for membership of two dollars biennially, or twenty dollars for life-membership.

A chairman was appointed for each state, with power to select his associates, consisting of the following gentlemen, with **SAMUEL WALKER**, of Massachusetts, as chairman of the whole:

Maine—Henry Little, Bangor.
New-Hampshire—Henry F. French, Exeter.
Vermont—C. Goodrich, Burlington.
Massachusetts—E. Wight, Boston.
Rhode-Island—Stephen H. Smith, Providence.
Connecticut—George Gabriel, New-Haven.
New-York—P. Barry, Rochester.

New-Jersey—Wm. Reid, Elizabethtown.
Pennsylvania—Thomas P. James, Philadelphia.
Delaware—Dr. Lewis P. Bush, Wilmington.
Maryland—Samuel Feast, Baltimore.
District of Columbia—Joshua Pierce, Washington.
Virginia—Yardley Taylor, Purcell Store, Loudon co.
South Carolina—William Sumner, Pomaria.
Georgia—Stephen Elliott, Jr., Savannah.
Florida—A. G. Sema, Quincy, Gadsden co.
Alabama—Charles A. Peabody, Gerard.
Mississippi—Thomas Affleck, Washington.
Missouri—Thomas Allen, St. Louis.
Ohio—R. Buchanan, Cincinnati.
Indiana—J. D. G. Nelson, Fort Wayne.
Illinois—Dr. J. A. Kennicott, Northfield.
Kentucky—E. D. Hobbs, Louisville.
Iowa—James Grant, Davenport.
California—Capt. W. Macoubray, San Francisco.

The standing committee on Foreign Fruits are, C. M. Hovey, of Mass.; J. P. Kirtland, Ohio; Charles Downing, of New-York; Robert Buist, of Pa.; P. Barry, of New-York; S. L. Goodale, of Maine, and B. Lines, of Ct.

On Native Fruits—Dr. W. D. Brinkle, Pa.; F. R. Elliott, Ohio; E. Tatnell, Jr., Del.; Thomas Hancock, N. J.; Benjamin Hodge, N. Y., and H. P. Byram, of Kentucky.

On Synonyms—J. S. Cabot, Mass.; J. J. Thomas, N. Y.; A. H. Ernst, Ohio; J. A. Kennicott, Ill.; S. D. Pardee, Ct.; A. Saul, N. Y., and J. D. Fulton, Pa.

The discussions in relation to extending or altering the list of recommended fruits, were attended with much interest, and drew out much valuable information. We can, at present, present only a very brief abstract.

S. Walker, of Boston, proposed to strike *Dearborn's Seedling* from the former list, asserting that it was too small for market,—very small unless on vigorous stocks,—and a poor grower. S. B. Parsons had found it the best pear of its season on Long Island. J. H. Hays regarded it one of the most profitable of pears—that if stricken from the list, it would not be stricken from market—thought it variable with locality, but very valuable. B. V. French of Mass., thought it an inferior pear—the trees he could not make grow. G. B. Deacon, of New-Jersey, thought it a very good pear, worthy of cultivation. S. Walker admitted the excellent quality of the fruit, but on account of its small size, and the poor growth of the tree, regarded it as of little value on the whole. S. B. Parsons said the same reason would condemn

the Seckel. A. H. Ernst stated that the Seckel grew well at Cincinnati, but from its small size would not sell; it rotted on his hands, while large and poor pears commanded a good price. P. Barry, of Rochester, considered the Dearborn's Seedling as one of the most valuable in western New-York. C. M. Hovey said it was regarded as the best summer pear when adopted, and has continued to sustain its character when well cultivated and thinned. F. L. Olmsted stated that Rivers had found it to grow well on pear and fail on quince. This was corroborated by S. B. Parsons—who asked S. Walker if his trees were not on quince stocks, —who stated that they grew nearly as badly as they could on quince, and would generally die out in about two years. The motion to strike off this pear was withdrawn.

The *Washington pear* was added to the list, for general cultivation, without any objection.

The *Duchesse d'Orleans* was next proposed, and among many remarks, M. P. Wilder stated he had found it a poor grower on quince, and good on the pear—had not, with Robert Manning, found it a great bearer, but could bear witness to its fine appearance and quality. It was concluded to let it remain on the list for trial.

The *Doyenne d'Ete* being called up, A. H. Ernst stated that he had fruited it seven years, and pronounced it handsome and valuable. Hovey, Barry, Wilder, and others, corroborated this opinion, some of whom thought it grew best on pear stocks. S. Walker thought well of this pear, but did not find it to come up to the high character represented. C. M. Hovey called on him to name a better, when he named the *Madeleine*, which he regarded as superior. P. Barry found it to ripen before the *Madeleine*, and regarded it as decidedly the best—found it a "splendid grower" on quince. When allowed to ripen on the tree, it was worth little, being dry and mealy, but was fine and juicy if house ripened. B. F. Nourse found it fine in Maine, and a good grower.

The *Beurre d'Anjou* was proposed, and M. P. Wilder thought there would be a unanimous expression in its favor—and stated that it was the best new pear he had fruited in ten years, and that it had kept till January and February. T. Hancock had found it a most valuable pear,

the crop evenly distributed through the tree. S. Walker found it to bear well and evenly—the fruit of fair size, fine shape, and very delicious—and would undoubtedly be held at the highest price in market. It was unanimously adopted for general cultivation.

Manning's Elizabeth was proposed—C. M. Hovey regarded it as one of the most delicious of August pears, the only objection being its small size. F. R. Elliott had found it a tardy bearer. C. M. Hovey had also. T. Hancock had fruited it when four feet high and two years old. B. Hodge had also fruited it, early, but found it not equal to Bloodgood or Rostiezer. It remains on the list for trial.

Brand's St. Germain was proposed—J. C. Cabot said it was a fine pear, but is not worthy of general cultivation—it is small, a poor grower, and liable to crack. It remains on the trial list.

The *Pratt* was similarly disposed of.

The *Ott* was taken up. Dr. Brinckle considered it the best summer pear known, having the flavor of the Seckel, and a month earlier. F. R. Elliott found it excellent in Ohio, but doubted if experience was sufficient to place it on the general list. There were 17 votes in favor of placing it there, and 15 opposed. So it remained in its former position.

Ananas d'Ete, *Fontenay Jalousie*, and *Van Assene*, were taken up, but did not pass beyond the list of those that promise well. F. L. Olmsted, T. Hancock, and others, stated that the *Fontenay Jalousie* cracks with them; C. M. Hovey and A. H. Ernst, said that *Van Assene* proves very fine with them, while J. S. Cabot and others found otherwise; and with T. Hancock it cracked very badly.

Doyenne Boussock.—J. Cabot had fruited it for some years, and thought it lacks flavor, but is so large and handsome that he regarded it valuable. Many others corroborated this opinion, and it was placed on the list for general cultivation, but not unanimously.

The *Lawrence* pear was placed on the list of those which promise well, for trial.

The *Kirtland pear*, which several had found to grow well on the quince, was also placed on this list.

There were 19 votes against the *Duchess of Angouleme*, and ten for it, for general cultivation.

There were 17 votes for the *Beurre Giffard*, as promising well.

The *Compte de Lamy*, although a fine pear, was not added, on account of its small size.

The *Autumn Paradise* was very generally and highly commended, and adopted for general cultivation.

The *Duchess of Beri* and *St. Michael Archangel*, by 5 votes; the *Diller pear* by 7 votes, and the *Limon*, or *Beurre Haggerston*, by 4 votes—were placed on the list for trial, as promising well.

The *Early Richmond* cherry, was placed by 11 votes on the list for general cultivation, for culinary purposes.

The *Bigarreau Gaubault*, *Reine Hortense*, and *Early Purple Guigne*, were placed on the list for trial. S. Walker stated that the *Gaubault* was of remarkably crooked growth in the nursery.

The *Imperial Ottoman* plum, *Hudson Gage*, *Coe's Late Red*, *Blue Imperatrix*, and *Reine Claude de Bavay*, were also placed on the list for trial.

APPLES.—The *Smokehouse* appeared to have been much cultivated in Pennsylvania, and was highly commended. It was recommended for trial. The same disposition was made of the *Melon*, *Hawley* and *Autumn Bough*.

Red Canada or *Old Nonsuch*. A general expression in its favor, although S. Walker found it to overbear, and produce some very small fruit—others had found it spotted—14 votes placed it on the list for special localities.

Northern Spy—D. Miller, of Pa., had fruited it, and found it very knurly—S. Walker stated it was poor at Danvers, yet he said the first specimens he had received from Western New-York, were as good as any apples he ever tasted. S. Goodale said that in Maine some were very good, and others very poor. It was generally admitted as of high excellence, as grown in Western New-York. J. H. Watts said it generally sold at Rochester for \$2.50 per barrel, and some the last spring, had sold in New-York city for \$9.00. It was placed on the list for special localities by 22 votes.

The committee on Native Fruits reported the following as "best," among the new sorts present: *Jeffries* apple and *Richards*; *Susquehan-*

nah peach; and *Moyamensing*, *Styre*, *Edward's Elizabeth*, and *Quinnipiac* pears.

STRAWBERRIES.—*Jenny's Seedling* received 7 votes for placing it on the list for general cultivation; and *Burr's New Pine*, 15 votes. Willey did not receive the two-third vote, and did not go on this list.

The Congress adjourned to meet in two years at Boston. During its session appropriate resolutions were introduced and adopted expressive of its loss by the death of A. J. DOWNING, and a Eulogy on his character, delivered on the evening of the 18th, by MARSHALL P. WILDER, which was eminently characterised with the ability, chasteness, and pathos, which this distinguished gentleman has at his command.

Pomological Meetings at Utica.

Interesting pomological meetings, consisting of a few of the most intelligent cultivators in attendance at the New-York State Fair, were held on the evenings of the 7th and 8th of 9 mo., (Sept.)

FIRST EVENING.—The *Winter Nellis Pear* being called up for discussion, P. Barry, of Rochester, stated that it was of weak and crooked growth, would not grow on the quince; but he admitted it was a pear of high flavor. This opinion was corroborated by Wm. Reid, of Elizabethtown, N. J., who spoke of the scarcity of this tree in nurseries, as proving the difficulty of its culture. C. M. Hovey, of Boston, regarded it a vigorous grower, although slender, and said it was one of the twelve regarded as best at Boston. F. R. Elliott, of Cleveland, considered it as a handsome, fair, and good fruit. W. R. Coppock, of Buffalo, had known the fruit as good as the *Seckel*, and had found the growth thrifty though slender. J. Morse, of Cayuga Bridge, stated that after having grown it for many years, he found it never blighted, and he regarded it as only excelled in value by the *White* and *Gray Doyenne*. Wm. Reid stated that it dropped its leaves badly, as well as *Flemish Beauty* and others. T. C. Maxwell, of Geneva, and J. Morse of Cayuga, both stated that *Flemish Beauty* held its leaves well, in spite of the drouth.

Vicar of Winkfield.—C. M. Hovey, while he regarded the *Winter Nellis* as best to eat, found the *Winkfield* best to sell—and although not of high quality, was very productive and showy—the tree was beautiful and ornamental

—he had known the Winkfield to sell for 75 cents per dozen, and the Glout Morceau for three dollars per dozen. P. Barry would plant the Winkfield in a selection of a dozen sorts, and valued it highly—the Glout Morceau had disappointed some cultivators in Western New-York—it was not the best grower, and did not always mature well. Wm. Reid and others thought it a good grower.

The *third best winter pear* was asked for, and the Vicar of Winkfield was agreed to stand next to Winter Nells and Glout Morceau.

C. M. Hovey stated that several Flemish pears were apt to have small and worthless fruit among them, among which he named Spoelberg, Wurtemberg, Marie Louise and Passe Colmar—he knew of no American pears liable to this defect. P. Barry cited the Stevens' Genesee, and Dearborn's Seedling, as being similarly defective.

M. Kelly, of Cincinnati, had not found the American pears harder than the European—in a locality where the tree is strongly liable to injury.

C. M. Hovey found but few American pears tender, and but few that did well on quince stocks—indeed, very few of any origin did well on quince—but he did not know the same proportion of American as of European for this mode of culture.

C. M. Hovey stated that Dearborn's Seedling failed on the quince after a few years—that he should dig up his trees, as they had become an eye sore. T. C. Maxwell had large trees of the Dearborn's Seedling, which did well on quince. Wm. Reid knew trees of the Andrews ten feet high, which grew and did well. These are both American seedlings.

P. Barry thought more experience was needed on this subject—the stocks at first used here were not of good quality—and he thought if the trees were placed in good soil, properly manured, pruned, and not allowed to overbear, that many would succeed well, which would otherwise fail.

The *best early pear* being called for, C. M. Hovey and P. Barry named the Doyenne d'été—Wm. Reid recommended the Madeleine as earlier—but it was not found so at Boston and Rochester, where the Madeleine was regarded as second best.

The *two best market cherries* being asked for, early and late, most agreed in recommending the Early Purple Guigne and Downer. P. Barry named the Early Purple Guigne and Belle Magnifique. Wm. Reid named the Mayduke as early. The Sweet Montmorency was regarded by C. M. Hovey as a good late sweet cherry. P. Barry thought it would not sell, when C. M. Hovey stated that he had known it to sell for fifty cents per quart.

SECOND EVENING.—The *superior hardiness of seedling peaches* over budded ones, was proposed as a subject for discussion.

W. Tracy stated that peaches could not be raised at Utica except within the city, the warm and moist valley of the Mohawk preventing a sufficient ripening of the wood; while at Clinton, on higher and more exposed ground, crops were frequently obtained. He stated that two trees within the city, fine seedlings, which were well shaded at the roots from the influence of the sun, bore abundant crops.

C. M. Hovey considered the protection afforded them, as a reason for their successful bearing, without regarding the circumstance of their not being worked. A friend in Kentucky had sent him buds of one of his finest peaches, a fruit which often grew twelve inches in circumference—the buds grew, but the growth was so poor, and they gummed so badly, as to be perfectly worthless. He had generally found seedlings more tender than budded varieties, being often killed at the ends of the branches, while most budded sorts escape even to the very tips.

Dr. Warder of Cincinnati, in explanation of the reason that peach trees were killed the past winter in Kentucky, stated that the thermometer the past winter, in the same region had fallen to 22° below zero. F. R. Elliott said it had fallen to 19° below at Cleveland, a part of the crop escaping.

J. J. Thomas stated that the thermometer at Macedon, in Western New-York, had sunk during the past winter to 18° below zero, which had not before occurred for many years—that about one-half the peach buds on his grounds had been destroyed, which was a smaller proportion than in other winters when the cold was several degrees less severe. This result he ascribed to the *uniformly* cold weather, without

the influence of warm periods in starting the buds, and to the fact that after the severest cold, the sun was obscured by a curtain of clouds. He had observed that buds were often destroyed on the sunny side of branches, while those which were thawed gradually on the shaded side had escaped.

H. E. Hooker, of Rochester, had known peaches at Montreal, where the thermometer not unfrequently falls to 20° or more below zero, saved by the simple protection of a mat, [which could not have increased the warmth of the air, but only prevented radiation, and excluded the sun's rays.] He remarked that budded trees consisted of nothing but *selected seedlings*, and that he had usually found them to endure the cold best.

C. M. Hovey thought budded trees the hardiest, because they usually consisted of such varieties as were of strongest growth.

P. Barry had known native seedlings, standing for many years in grass, loaded with heavy crops, when, had they been cultivated, they might have been barren. This, C. M. Hovey ascribed to the well ripened, and not succulent growth which they acquired. He considered some varieties as hardy, and others as tender, entirely independent of the influence of budding.

A list of those sorts which were hardiest, and which bore most uniformly and abundantly after severe winters, being called for, C. M. Hovey named the following:—Yellow Rareripe, Coolidge's Favorite, Bellegarde and Oldmixon Free. Several gentlemen from Western New-York named the Early Barnard, or Alberge of that region, as being eminently hardy and uniformly productive. John Morse of Cayuga Bridge, had found Jacques' Rareripe to be the hardiest and best peach for market, out of some forty sorts, and Early Barnard next. J. J. Thomas named Fay's Early Ann, which he had fruited for eight years, as one of the most uniformly productive of early peaches; in two different years, when the Tillotson and Serrate Early York had nearly failed, this had borne good crops. The present very unproductive season, the White Imperial has also borne fully.

A list of such pears as had grown well on quince stocks, and had borne good crops for several years, without exhausting the tree, was

next called for, and the following proposed, without objection:

Louise Bonne of Jersey, Vicar of Winkfield, Glout Moreau, Beurre Diel, Angouleme, White and Gray Doyenne, Napoleon, Beurre d'Amalis, Easter Beurre, Soldat Labreur, Long Green of Autumn, and Striped Long Green of Autumn, Henry IV, Summer Frankreal, Bergamotte Cadette, Madeleine, Beurre d'Anjou, Urbaniste, and Doyenne Boussock.

New-York Hort. Society.

The second exhibition of this Society was held on the 20th, 21st, 22d, and 23d of Sept., at the Metropolitan Hall, New-York, and we rejoice to say was very successful and creditable to the managers of this new society.

We say rejoice, because, now that the diffusion of horticultural knowledge is so rapidly increasing amongst us, and the commendable spirit of enterprise in this branch of science is aroused—we are glad to see progress in the right direction; and the more so as it was most unpardonable for the "Empire State" to be lagging behind, when the prosperity of such societies as those of Massachusetts and Pennsylvania, not to name the numerous others equally praiseworthy, have long set so good an example.

The first exhibition of this Society was held in June last, when, from the evidence we then saw of an earnestness of purpose about the originators of the meeting, we augured well of the prosperity of the Society; while the encouragement which we saw was extended to it by some of the most celebrated amateur cultivators, manifested amongst others, by the kind consideration of Mr. Cope, in sending from his splendid collection a specimen of the far famed Victoria Lily, satisfied us that nothing but perseverance is necessary to render this Society prominent in its amiable rivalry with its more matured sisters in other parts of the country.

The present exhibition convinces us that our prognostications have not been ill founded. It was not nevertheless without some misgivings as to the result that we wended our way on the 20th to Metropolitan Hall; wishing well as we do, in all sincerity, to this and every other rightly directed effort in the furtherance of our favorite science. For, having ourselves had a pretty extended experience in these kind of things, we are well aware of the numerous diffi-

culties, prejudices, conflicting interests and views, which have to be contended with, and smoothed down at the outset of all similar undertakings, and which if not judiciously handled, too frequently cause the shipwreck at their origin of many a well intentioned onward movement. When, however, we cast our first glance over the tables of Metropolitan Hall, we felt that the only duty left us was to congratulate the members of the Society on their success. Although of course in point of extent the exhibition could not be expected, as the production of a young Society, to equal or approach those of older societies; yet the quality of the collection as a whole was highly creditable to the exhibitors, and as encouraging to the exertions of the managers, as it must have been gratifying to the members and to their numerous visitors. We were gratified to perceive that not only was considerable company generally there, but that a large portion of the substantial merchants and their fair ladies had resolved to show their fellow citizens that the elegant display which had been brought together was appreciated and enjoyed by them.

The fruit was in considerable quantity and almost all good.

In **GRAPES**, we are glad to bear willing testimony to Mr. Charlton's skill, as manifested in the very fine specimens which gained for him the first premium for the following eight varieties:—*Victoria*, (very fine,) *Black Prince*, *Syrian*, *Xeres*, *Austrian Muscat*, *Black Hamburgh*, *Reine de Nice*, and *Deacon's Superb*. They were indeed "superb," all of them—well colored, and with the bloom well preserved. The vines from which they were cut, were stated to be three years old. A discretionary premium was also given for three fine bunches of *Black Hamburgh*, to H. Sheldon, Esq., of Tarrytown, and another premium of the same kind to Alex. Gordon, Long Island, for *Muscat* and *Syrian grapes*, which well deserved the distinction.

APPLES AND PEARS were in tolerably large collections. Messrs. Parsons & Co., of Flushing, exhibited 70 varieties of apples, fine in quality, and containing many both of old and new favorites. Their collection of pears was equally fine. Messrs. Wilson, Thorburn and Teller, of Albany, also exhibited an extensive

and very good collection of apples, which we observed the connoisseurs examining very astutely. With reference to some of the plants, and particularly as regards the apples and pears, the divisions between those belonging to the different exhibitors, were so indistinct, that we found it impossible, in many cases, to find out to which of the plates of fruit the premium cards applied, or we should have more particularly adverted to some of these premiums, for many of them were very meritoriously earned.

In **HOT-HOUSE PLANTS**, Messrs. Hogg & Co. were the successful competitors for the first premium, in whose collection were noticed a fair plant of *Schubertia graveolens*, and one of *Allemanda nerifolia*, nicely grown, but the bloom hardly expanded enough; they would have been in greater perfection in another fortnight or so. Messrs. Hogg also exhibited well grown and remarkably healthy specimens of *Musa humilis*, and of *Maranta zebrina*, which indicated careful culture, and were very creditable to their establishment. We noticed two good plants of the fragrant *Hedychium Gardenianum* from the nursery of Mr. Dunlap.

In **GREEN-HOUSE PLANTS**, the first premium was awarded to M. Coleman, gardner to A. P. Cumings, Esq., of Williamsburg, who exhibited a very fine *Araucaria Braziliensis*, much better grown than this variety generally is. Mr. A. Bridgeman gained the second premium, and his collection contained several very neat plants, but of course the lateness of the season precludes the expectation of seeing this class of plants in the perfection in which they were in May and June.

There were several fine specimens of plants in the rooms, among which we must particularly mention a *Fuchsia* six feet or more high, well covered to the bottom with foliage, and very clean and well grown, from the collection of Leonard Spencer, Esq.; also a large *Begonia argyrostigma*, and a fine *Licopodium* in equally luxuriant growth, and some other things from the same gentleman. These plants we noticed, all indicated the same care and good management, and although we have not the pleasure of Mr. Spencer's acquaintance, we hope our merited approval may operate as an additional stimulus to his exertions, so that on future occasions he may contribute in larger quantity to

these exhibitions; and not only so, but that his example may induce more of our many amateurs to contribute from their valuable collections in aid of the exertions of the managing committee, to render their display worthy the patronage which the public appears disposed to accord to it. Neat specimens of *Angelonia Gardneriana*, and of *Brunfelsia Americana*, were exhibited by Messrs. Hogg; and a fine *Acacia pubescens*, with its elegantly delicate foliage, by Mr. T. Dunlap. We noticed also two well grown *Begonias* from Mr. J. Buchanan.

Messrs. Hogg & Co. obtained a discretionary premium, also, for a very neat and well cultivated, but not very extensive collection of *COMPERIA*, which contained amongst them plants of *Cedrus Deodora* and *Cryptomeria Japonica*, three feet high at least—a fine *Araucaria excelsa*, the pretty drooping *Juniperus oblonga pendula*, and the elegant *Abies Clanbrasiliana*.

The first premium for the best 12 *CACTI*, was awarded to Wm. Chalmers, gardener to Thomas Richardson, Esq., Westchester co., amongst which were good, although moderately sized specimens of *Cereus senilis*, *Melo cactus communis*, in bloom, *Mammalaria decipiens*, *M. scopsea*, and *M. flavescens*. A fine specimen of *Melo cactus coronata*, sent by Messrs. Jervis, also merits notice; it was the largest in the rooms.

For *VERBENAS* in pots, the first premium was awarded to J. M'Key, gardener to Mr. A. Reid, and the second to Mr. Daniel Boll—both of whom we know to be too good judges of what they ought to have been at this season of the year, to wish us to praise them as they were. There were some good cut flowers of *Verbena*, from Mr. Isaac Buchanan.

The *FERNS* were not numerous, but Messrs. Hogg & Co., had a fine specimen of the Stag-horn fern, (*Platycerium alcornocorne*), and a very pretty *Licopodium umbrosum*.

In *CUT FLOWERS*, there were many bouquets displayed, of all descriptions, and many of them well put together. The basket of wild flowers sent by Archibald Henderson, Long Island, was most interesting, and had it not been for the queen of the garden, the rose, which formed so formidable a rival in the other baskets, these wild flowers would almost have equalled in attraction their more aristocratic neighbors. John

Cranston, of Hoboken, obtained and deserved the first premium for a basket bouquet; but the second, given to Walter Parke at Mr. A. Reid's, was equally well merited. The large parlor bouquet of James Weir was very pretty; and with the two baskets attracted much attention from the fair visitors.

The display of *Cut Roses* did not equal our expectations. Mr. Daniel Boll, long celebrated amongst amateurs for his fine collection of roses, had the first premium for general display; but neither his nor any others in the rooms, were in fine condition. Mr. Mateo of Astoria, had some good varieties in his cut roses, and a seedling or two, but the latter were in too bad a state to judge of as regards quality.

Several *ORNAMENTAL DESIGNS* were exhibited, and they displayed ingenuity at least. One we observed, exhibited by Mr. William Chorlton, of Staten Island, and we trust he will forgive our expressing the hope that a man who can grow such grapes as we have noticed above, and such plants as he does, will give up the construction of these floral *monstrosities*. If the public require them, they must be constructed by somebody, but inasmuch as hundreds can do so, who Mr. C. would not trust for an hour's work in his green-house, and as so few can grow fruit and flowers as he can, let us entreat him to believe "flower temples" are beneath his notice. Bouquets in any and every shape, are, by themselves, elegant, and we were going to say indispensable adjuncts to the gardener's exhibition of some results of his skill, and they add to the beauty and decoration of our parlors and drawing rooms; but when flowers are so persecuted into divers shapes and forms that you require almost a telescope, when at a short distance, to ascertain whether the thing is made of flowers or paint, we hold that the office of the gardener, no less than his dignity, is abused by this perversion of (so called) taste. In Europe these things are quite exploded, as belonging to that kind of march which here we don't want—namely, the march *backward* instead of *forward*.

The *DAHLIAS* were by no means in good order. The unfavorable weather no doubt operated to an extent beyond the control of the growers. For general display, the first premium was given to Mr. T. Dunlap, and the second to Messrs.

J. M. Thorburn & Co. The two collections were so nearly equal in merit, that there was little to choose between them. Mr. Dunlap's appeared the most numerous, but the dark flowers predominated so much as to give a sombre hue to the collections. In Messrs Thorburn's the light varieties prevailed, and rendered them more attractive as a whole. We noticed in the latter, several new varieties which promise to be favorites.

We must not forget to thank Mr. Leonard Spencer for the well arranged and beautiful vase of *native grasses*, which contained twenty-two specimens, and was much admired. This gentleman, we are sure, can teach his neighbors how to "go ahead horticulturally," and we hope he will do so.

There were several pots of *Achimenes* exhibited, but we do not particularise them, because although clean and neat, they were by no means grown in the luxuriant way which this family of plants admits of, and in which at this season of the year, we expect to see them exhibited. Our friends must grow them faster, and shift them oftener than they appear to do, if they want fine specimens.

Whatever may have been the opinion of the visitors about the flowers of the exhibition, we are certain that there could exist but one feeling about the *vegetables*. They were all extremely fine, and the variety exhibited was highly creditable to the Society. We will notice first the four large flat Dutch cabbage, sent with many fine specimens of other vegetables, by Francis Brill, Esq., of Astoria, and also his Boston Marrow Squash. The first premium was given to J. Mitchell, gardener to Wm. Watson, Esq., Westchester, whose collection was very good, but the finest display, taken as a whole, was that of Jacob Giraud, Esq., of Bergen, N. J., a gentlemen well known to our scientific world as an ornithologist, and who we are glad to find thus turning his attention to experimental gardening. His specimens of carrots, beets of two or three varieties, potatoes, Swiss chard, cardoons, escarole, radish, egg plants (of six or eight varieties,) tomatoes, &c., in the whole about thirty sorts of vegetables, gave evidence of the most judicious and skilful culture. In addition he sent upwards of thirty varieties of Indian corn, of which his collection is, we be-

lieve, one of the best in the country, and is doubtless well known to our readers, from his exhibitions of it at the Annual Fair of the American Institute.

Altogether the exhibition was, we repeat, highly satisfactory, and induces us to hope for much from the Society in its second year.

We have one cause of complaint against the committee of management, which we are convinced they will remedy on future occasions. We mean the fixing Monday as the first day of the exhibition. Of all days in the week it is peculiarly that which ought to be avoided. To all exhibitors the day before the exhibition, is necessarily a busy one in preparing for the contest, and consequently should never fall on Sunday. M.

Albany and Rensselaer Hort. Society.

The autumnal exhibition of the Albany and Rensselaer Hort. Society, took place on the 18th and 14th ult. The display of fruits, flowers and vegetables exceeded that of any former exhibition. The Society met at 12 M. on Tuesday, its President, Dr. HERMAN WENDELL, in the Chair, who in an appropriate and feeling manner, called the attention of its members to the death of the late A. J. DOWNING, editor of the Horticulturist, and offered the following resolutions which were unanimously adopted:—

Resolved, That the members of the Albany and Rensselaer Horticultural Society, in common with others of the Pomological, Horticultural and Agricultural portions of our citizens, mourn sincerely the death of the late A. J. DOWNING, who has been more instrumental, than any other individual, in extending a taste for, and promoting the love of, all the branches of an art which conduces so much to the comfort and the pleasure of the community.

Resolved, That a copy of these resolutions, properly attested, be forwarded to the family of the late Mr. DOWNING, and that they be embodied in and published with the records of this Society.

The following gentlemen were chosen delegates to represent the Society at the Fair of the American Institute, to be held in New-York, in October:—

Joel Rathbone, V. P. Douw, Herman Wendell B. P. Johnson, J. McD. McIntire. B. B. Kirtland, Wm. Newcombe, Erastus Corning, Jr., Jefferson Mayell, James Wilson, W. A. Wharton, E. M. Van Alstyne, E. E. Platt and Elisha Dorr.

FRUITS.—In addition to the fine display of fruit by members of the Society, the following gentlemen contributed much to the interest of the show. Ellwanger & Barry of the Mount Hope Nurseries, Rochester, exhibited 53 varieties of pears, all finely grown specimens. John J. Thomas of Macedon, 17 varieties of apples and 15 of pears, which for size and beauty were not excelled. H. T. E. Foster, of Lakeland, Seneca co., 9 varieties of pears. H. R. Hart Whitestown, Oneida co., 11 choice varieties of apples. John Morse of Cayuga Bridge, 15 varieties of pears and 11 of apples. The samples shown by these gentlemen, gave evidence of careful cultivation, and the vote of thanks tendered to them by the Society was concurred in by every visitor to the show.

Among the exhibitions made by members of the Society, we noticed those of Dr. H. Wendell of Albany, who had 49 varieties of pears; Wilson, Thorburn & Teller, of Albany, had 53 varieties of pears, eight of peaches, and six of plums; Jefferson Mayell, 17 varieties of pears; J. S. Goold, 9 varieties of pears; V. P. Douw, of Wolvenhook, 13 varieties of pears; Hon. A. J. Parker, 14 varieties of pears; E. Corning, Jr., 10 varieties of pears. These, with several smaller exhibitions, made a very fine collection of fruits, and by far the best ever shown by the Society. The grapes shown by Col. J. Rathbone, Kenwood, were most beautiful specimens, of which seven varieties were grown under glass. The clusters were large, and the grapes highly colored, and of a superior flavor.

GREEN-HOUSE PLANTS.—Fine exhibitions were made by L. Menand, E. Corning, Jr., Col. J. Rathbone, though the collection did not embrace a large variety.

FLOWERS.—The display was larger than at any previous exhibition, and contributed much to the interest of the show. There were shown 81 varieties of Dahlias, by E. M. Van Alstyne, of Greenbush, who received the first premium; more than 60 varieties of dahlias, 40 of verbenas, 16 of roses, and several bouquets, by James Wilson; also a good collection of dahlias, verbenas, phloxes, &c., by Wm. Newcomb, of Pittstown. Col. J. Rathbone exhibited 42 varieties of dahlias, a fine display of roses, and other cut flowers. Additions were made to the display by E. Corning, Jr., V. P. Douw, L. Menand, and others.

A floral temple, six feet high, elaborately wrought and surmounted by the Goddess of Flowers, as well as several fine bouquets, were shown by Mrs. J. T. Van Namee of Pittstown. Also a complicated floral design, beautifully wreathed and studded, and bouquets, by Mrs. Emily Newcomb of Pittstown.

One of the most tasteful things on exhibition was a large pyramidal bouquet of artificial flowers, the handi-work of Mrs. E. A. Barber of Albany. The flowers were very perfect and in great variety, and were arranged with admirable taste, especially as regards the harmony and blending of colors.

VEGETABLES, were shown in great variety and remarkably fine specimens by several individuals. The exhibition was highly satisfactory and gave ample proof that the taste for growing fruit and flowers is becoming more general, and also that our gardeners and nurserymen are improving in their art. The several premiums awarded were generously left in the treasury of the Society to defray current expenses.

Ohio State Pomological Society.

A Convention of the Pomologists of Ohio was held at Columbus on 31st day of August and 1st of September, when a fine collection of fruits of the season, were exhibited from different parts of the state, and after organization, and the forming of a permanent State Pomological Society under a constitution, electing A. H. ERNST, Esq. of Cincinnati, President, J. L. WARDER of Cincinnati, Vice president; F. R. ELLIOTT of Cleveland, Secretary, and M. B. BATEHAM of Columbus, Treasurer; they proceeded to discuss the value of different varieties of fruit in various parts of the state, and at the same time to collect the multifarious local names, belonging to some of our fruits, and place them so that those who read their transactions may learn respecting them. The constitution states the object of the Society to be the collecting, collating and disseminating of knowledge on pomology, to the people at large; and for this end those who wish to assist and aid the cause can become members by paying two dollars to the secretary or treasurer. The funds are used in publishing the transactions; and the report of this meeting will be issued immediately. The society forwarded specimens of many Ohio fruits to the American Congress of Fruit Growers which met at Philadelphia on the 18th inst., and also appointed delegates to attend the same.

They adjourned to meet on the 11th of January, 1853, when it is expected there will be a fine show of winter fruits, and at which time it is purposed to petition the legislature for "material aid."—*Ohio Farmer.*

Domestic Notices.

SALE OF MR. DOWNING'S RESIDENCE.—By reference to an advertisement in our columns, it will be seen that the beautiful residence of the late Editor of the *Horticulturist* is to be sold on the 7th of this month. It is to be regretted that a place, upon the adornment of which Mr. Downing lavished so much of his art and taste, should not remain as an appropriate heir-loom to his family. How could the many friends of Mr. Downing more fittingly express their appreciation of his worth, and of the incalculable service he has rendered to his country, than by presenting this model, just as his own hands fashioned it—the home of his affections, so sacred to the warm and loving heart, —to his bereaved lady? What better monument could be erected to one whose whole soul was alive to beautifying and making more happy the homes of others, than thus to secure a home for one, who, by his untimely death, is at once deprived of the solace of life, and forced to seek a new residence.

The place is in strict keeping with the principles of the art he practiced, and we doubt whether a more tasteful country residence can be found. It is situated on the northern border of the village, on an eminence which overlooks the Hudson and commands a fine prospect in every direction. The house is in the Elizabethan style, and wears the quiet, unobtrusive air of a gentleman's residence rather than a nobleman's mansion. The grounds, comprising about six acres, are all planted in the most tasteful manner, and so disposed as to give the most pleasing effect to the shrubbery, lawn and flowers, which blend in a harmonious picture. The collection of fruits, plants, and flowers, is very choice and in the best cultivation.

The place will undoubtedly meet with willing and liberal purchasers; but we dread to think that the residence of our friend must be occupied by strangers—that henceforth the doors which have been so hospitably opened to all who had claims upon his attention, must hereafter be closed, even upon those who most dearly cherish his memory.

A POLISHED NURSERY.—The most neatly kept nursery of fruit and ornamental trees that we have ever seen in this country, by all odds, is that of WM. REID, of Elizabethtown, N. J. It occupies about thirty acres; and every portion of it appears to be as smoothly combed and brushed, as the most finished parts of other people's grounds. The broad alleys used as cart tracks, and for turning about the horse which cultivates the rows, are smoothly covered with a beautiful turf, kept closely shaven by mowing once a fortnight, and the edges are kept as smoothly trimmed as the walks of any ornamental garden. Even the open ditch, needed for the surface water, is kept sodded and shaven with mathematical accuracy. Where the rubbish was deposited—for rubbish must accumulate from every nursery,—we cannot say, for every remote corner of the grounds was preserved in the same neat appearance. The question may arise, where was his compost or manure heap—a most necessary, but rather repulsive appendage to every thriving nursery? Not thrust away in some remote and inconvenient place, as a thing not fit to be seen, but rendered an ornamental object by the rich masses of squash vines which hung down its sides, and the brilliant glow of *petunias* which covered its whole upper surface!

Those who have purchased of Wm. Reid, know that he is very successful as a grower of fine trees; and the excellent stock now growing on his grounds, especially of dwarf and standard pear trees, shows that neatness and thrift are by no means strangers.

SUMMER PEARS—JESSE COLBY, of Meriden, N. H., has forwarded us some fine looking specimens of a summer pear, which he regards as "the best summer pear extant—appears to do much better than any foreign varieties, a good bearer, vigorous grower, and hardy—it is called variously the Dorr, the Colby, the Udal, &c. It does not appear to be a seedling with us. We should like to know what other variety we could introduce as good or better, to ripen later, and as good a bearer."

This pear, which is described in Cole's Fruit

Book as a New Hampshire seedling, "large, fair, handsome, profitable for market—flesh rather coarse and dry, but sweet and pleasant," and in *Coxe's View* as the *Bellissime d'ete* or *Supreme*, "a singularly beautiful fruit," and if picked before too ripe, "a pretty good early pear," is no other than the FRENCH JARGONELLE, one of the rejected pears of the American Pomological Congress. The specimens sent were very fine ones for this sort, which evidently succeeds better in New Hampshire than in many other places, but we regard it as entirely superceded. The English Jargonelle, although less handsome, is much better, and ripens at the same time; closely succeeded by Bloodgood, Osband's Summer, Dearborn's Seedling and Rostiezer, and these again by Bartlett, Heathcot, Washington, Belle Lucrative, &c., all of which possess excellent flavor.

PIE PLANT AND ASPARAGUS.—A "Farmer's wife" wishes to know if the *large stalks* of the pie plant are the result of cultivation or of selecting a large sort—the time for manuring—distance asunder in planting—and number of leaves to be left to each root. Also the time to transplant asparagus, and best mode of culture. An answer to these inquiries has been accidentally delayed a few months.

Rows four feet apart, and plants two feet in the row, is a suitable distance for the *pie plant*. If the sort is large and the soil deep and fertile, they will need all this space. The "large stalks" are the combined result of good cultivation and selecting such large varieties as "*Giant*," a green sort with round stalks, which sometimes grow to the thickness of a man's wrist; "*Victoria*," red, equally large, earlier, and better in quality; and "*Downing's Colossal*," regarded by many as the best of all. There are some smaller and earlier varieties. The plantation should be covered with manure late in autumn, and this should be spaded in early in spring. All the leaves are usually allowed to grow.

Asparagus seed is sown in autumn or early in spring in drills about half an inch deep in heavy soil, and an inch in light soil, the ground being rich and highly manured. The seedlings should be set out at a year old, very early in spring or as soon as the ground can be worked, in soil which has been trenched or subsoiled and

made *very rich* to a depth of nearly two feet. Set the plants two inches below the surface, in rows two feet apart and a foot asunder in the row. The next autumn cover the plants three inches with manure. For two years, let the stalks grow to strengthen the roots, keeping the beds clean, raking off the dead stalks in autumn and covering with manure, to be forked in early in the spring. Some earth will perhaps need an annual replacing, or the plants will come too near the surface by the dressing they get. The third or fourth year will give fine crops, which will continue for many years.

It is usual to make very rich beds two or three feet deep, an excellent practice; and to plant them very thickly with plants, a very poor one—for the stalks can never grow so large when crowded. We have seen as large asparagus raised on ordinary corn ground, six inches deep, in drills three feet apart for horse cultivation, as in a bed three feet deep and half manure, with plants placed closely together. The finest stalks are always obtained by distance and depth combined. Asparagus, being usually increased by seed, runs somewhat into varieties, and a "*Giant*" variety is much lauded; but the size depends mainly, if not wholly, on the cultivation which is given. A bed of earth and manure *well mixed*, two feet deep, and with plants a foot by two feet, will convert any asparagus plants into *giants*. Salt is a good manure, which we have seen applied in sufficient quantities to kill the weeds without injuring the plants.

SYNONYMS OF PEARS.—The following statement relative to the synonyms of some well known pears, is an extract from a letter of ANDRÉ LEROY, dated Angers, Aug. 18, 1852, and although furnishing information well known to our eminent pomologists, may be of interest to others: "The *Beurre d'Anjou*, we find is the same as *Ne plus Meuris*; *Duchesse d'Orleans* is our *Beurre St. Nicholas*, raised at Angers, and very well known to every nurseryman of our country. The *Louise d'Orleans* is the same as the *Urbaniste*, well known also. We have received the *Flemish Beauty* under thirteen different names. Why is it that the English and Belgian Pomologists do not accept our name of *Beurre d'Aremberg* for the pear that the first call *Glout Morceau*? And our *Orpheline d'*

Enghein?" [The names *Glout Morceau* and *Beurre d'Arembergh*, as applied to the French Aremberg, and Orpheline d' Engenheim, have become so fixed and universal in England and America, that it would be entirely out of the question to think of changing them now, and they must, from necessity, retain their present meaning and application. Ed.]

A MONUMENT TO MR. DOWNING.—Under this head, Mr. J. H. WATTS, in the September number of the *Horticulturist*, proposes that a piece of ground in the neighborhood of Mr. DOWNING's late residence, be selected, "in which might be planted the native trees of our country, and the ornamental ones of others—such as the numerous nurserymen, and all his admirers, would be glad to appropriate for the purpose, to be gathered from all localities possible—there to be planted around such enclosure, and about the resting place of one so admired when living, so lamented when dead."

It is much to be desired that this idea should be carried into execution; and it has occurred to me that no better or more appropriate device for a *Monument* to be placed within such enclosure, could be designed, than the *Vase of Fruit* which monthly decorates the cover of the "*Horticulturist*." It should be constructed of free stone, or marble; and I cannot doubt that the cost would readily be defrayed by the numerous subscribers to the *Horticulturist*. A. COXMAN. *Roxbury, Sept. 18, 1852.*

NEW FRUITS TESTED AT BOSTON.—Every cultivator knows the importance of selecting the best sorts, and this selection is greatly facilitated by knowing the experience of others. With this view, we give a list of those which were more particularly commended by the committee of the Massachusetts Horticultural Society, in their report the past winter, with the remarks of the committee:—

Strauberrries—New Pine, and Burr's New Pine, of high flavor and very fine. Early Virginia, Hovey's Seedling, and Jenny's Seedling, the most profitable and best for general cultivation near Boston.

Cherries—Monstreuse de Mezel, resembling Black Tartarian.

Melon—Christiana—"not yet equalled," raised by Capt. Lovett, from a green Malta,

impregnated by a very early variety—and for which the Society awarded fifty dollars.

Blackberry—cultivated High Bush—well worthy of cultivation—remarkable for size and beauty.

Raspberries—Knevett's Giant, Franconia, and perhaps Fastolf—worthy of a place in every garden.

The Northern Spy apple has again borne, but "the Committee see no reason to alter the opinion they have before expressed, of the unsuitableness of this variety for general cultivation in this vicinity." Caution against hasty decisions is, however, shown by the fact stated by the committee, "that what is now beginning to be regarded as one of our best winter pears, the *Glout Morcean*, was but a few years since almost condemned as nearly worthless."

MARTEN'S SEEDLING PLUM.—In obedience to a request made by the late editor of the *Horticulturist*, I submit a few specimens of a new plum, called *Marten's Seedling*, (from the fact of its having originated in the garden of a gentleman of that name.) I also enclose fruit of the Jefferson variety, in order that you may be enabled to judge comparatively of each individual sort. I have fruited Marten's Seedling for the last five years, and most unhesitatingly pronounce it equal, and in some respects superior, to the best varieties at present in cultivation or generally known.

I annex the reasons for the superlative encomiums so freely bestowed upon it, and also to satisfy the sceptical that its merits are not exaggerated. In the first place, the fruit, when let hang until fully matured, it not surpassed in point of flavor by a Green Gage. Secondly—it is as productive as a Lombard or Red Gage. Lastly—it is exceedingly hardy, and a prodigious grower, not unfrequently realizing *nine feet from the bud in a single season*. It is also a remarkably early bearer. I have at present some eight or nine trees, but three years old, with crops of fine matured fruit. To this add the fact that it is capable of being propagated as rapidly as the apple or pear, (rarely losing ten per cent in budding,) and you have a fruit not easily beaten. C. REAGLES. *Schenectady, Sept. 2, 1852.*

HAWLEY OR DOUSE APPLE.—Having been able to exhibit fine specimens of the "Hawley" ap-

ple at the Convention at Philadelphia, on the 13th of the present month, and finding them highly approved by gentlemen there, who were conversant with the variety, I thought it due to your readers to furnish you with some for your opinion. It has before been noticed in the "Horticulturist," but it will call attention to its merits to place it again before the fruit growers.

It was originated in Canaan, New-York, and has been grown for some ten years at Rochester, to a limited extent as yet—accidentally I found five trees of it in Greece, Monroe county, which trees are well grown and in plentiful bearing. It ripens from 15th to 20th September, and is valuable that it succeeds the "Early Strawberry" and "Early Joe." For cooking it is superior, and for a desert fruit it has but few equals in my humble opinion. J. H. WATTS. *Rochester, Sept. 15, 1852.*

We annex Mr. THOMAS' description of this apple:—

"HAWLEY. (*Syn. Dowse.*) Quite large, roundish, slightly conical, sometimes nearly round, with a broad obtuse apex, and slightly flattened; smooth, slightly oily when kept within doors; pale green, becoming yellow, sometimes a very faint orange cheek; stalk one-half to one inch long, slender; cavity wide, deep, acute, sometimes slightly obtuse; basin deep, slightly furrowed; flesh yellowish white, fine grained, quite tender, with a mild, rich, sub-acid fine flavor. Ripens at mid-autumn. A very valuable apple. Shoots of rather slow growth. Origin, Columbia county, N. Y., and cultivated chiefly in western N. Y."

MESSRS. THORBURN & Co., ASTORIA.—We are glad to find that these gentlemen are keeping up their collection of Dahlias in the same perfection that they have for some years past. The plants this year do not bloom quite so well as usual, owing to the weather principally, but altogether they are well worth a visit, if only to see some of the new varieties recently introduced, which are valuable additions to our stock of these flowers. We find our friend Mr. G. C. Thorburn, has been obliged for want of room, to remove his green-house plants and stock to his new nursery, at Newark, N. J. The situation is well adapted to the purpose, and being within ten minutes of the railroad station, it is, although further from New-York, as readily and speedily accessible as Astoria. We wish him all success in his new undertaking.

HOGG & Co.'s NURSERY, NEW-YORK.—We visited this establishment the past month, and were gratified to find it maintaining its deserved reputation. The general appearance of the stock of greenhouse and frame plants is healthy, and their arrangement and state of culture indicate that care and attention has been given them during their summer exposure, the good effects of which will not fail to develop themselves during the coming season. We were also pleased to find the hot-house plants remarkably clean, and although the stock of them is limited, it is satisfactory to see that they receive that habitual care which in general collections is frequently not paid to them. We see Messrs. Hogg have a young plant of the Victoria Lily growing vigorously, so that our New-York friends will soon have the opportunity to gratify their anxiety to see this beautiful addition to our exotic flora, domesticated amongst them.

THEORY OF PRUNING.—*Dear Sir:* I find that in the August number of the Horticulturist I am arraigned before a tribunal of very high authority in such matters upon a charge of having made innovation upon the doctrines which governed the practice of pruning in the good old days of 1846! I perceive also that the indictment contains two counts, setting forth in substance that in an article in the May number of the Horticulturist I aver "that severe summer pruning of the fruit bearing and lateral branches of the grape is the only correct practice, acknowledged to be so by all cultivators." And again charging that in the same article I aver "that everybody does or may know this (it) to be the correct practice." It might be a sufficient defence to both these charges simply to state that no such broad assertions are contained in the article from which they purport to be quoted; but believing that in the well turned periods of the article over the signature of "C.," who is the author of this complaint, and in his accurate description of the renewal system in managing the grape, I recognise the proportions of a personal friend, of one who is no novice in the philosophy of vegetable life, and of one also who is incapable of coming out on such a subject from a mere desire to assail, I fear I may have provoked his comments by a failure to make apparent the drift of my remarks; with your

leave, therefore, I propose to say something in explanation.

A leading principle in the theory of pruning attempted to be set up by me, supposes an excessive growth of wood and the simultaneous production of an excessive fruit crop, incompatible things, and it was about this principle I was reasoning when the statement was made that everybody does or may know that upon a vine capable of sending out shoots 10, 15, to 20 feet long, if two branches be taken, each having one cluster of grapes, and they be so treated that one forms no wood, whilst the other makes a long shoot, the cluster on the branch without wood will be large, the other a starvling. This is no paradox—the doctrine may be found in the books prior to 1846, and now is becoming rife.

In a late number of the *Western Horticultural Review* may be found a good article setting forth in substance that the gooseberry may be successfully grown and mildew prevented simply by cutting out all the shoots of a light green color, thereby preventing a diversion of the sap from nursing the young fruit. Indeed, if I mistake not the personal identity of C., he too is an eminently successful grower of the gooseberry upon this identical principle, pinching out the points of his growing shoots during the early stages of development in the fruit crop, and afterward rubbing off any buds bursting into growth while the crop is maturing. What I said further in relation to summer pruning had reference merely to the time of performing the operation, and upon this branch of the subject I only say that most cultivators fix upon a time subsequent to the setting of the fruit, intimating myself that in cases of great luxuriance this setting of the fruit is a period too late to secure the greatest advantage to the crop by cutting out the growing points of the bearing branches, whilst, as my theory maintains, if the wood-forming and fruit-bearing forces be equally balanced, no pruning may be required at all. There is one suggestion in my article of May to which the attention of "C." and of cultivators generally is respectfully invited, and that is a founding of the rule of practice in this case upon principle instead of dogmatism—upon the condition of the vine, not the length or breadth of the trellis, making *luxuriance in the branches*

a test for the necessity of pruning and not "*inconvenient length*." The suggestion of that article goes even farther than this; it contemplates grouping all plants bearing the fruit crop upon branches of the current year's growth, which branches are capable of making an active growth at the points after setting the fruit crop into one class, in which over-luxuriance in each was manageable by a common remedy—shortening-in. In maintenance of that suggestion, allow me to make a few quotations. Gen. James Hamilton, in an excellent agricultural address delivered to a cotton growing audience at Fort Mitchell, Alabama, in July, 1844, takes occasion to say that he was "satisfied that in a rank and wet season we shall make at least one-third more to the acre by topping the cotton plant at about four and a half feet high and afterward shortening-in the long laterals."

Of the tomato, Prof. Mapes, whom his contemporaries consider as "no mean authority," says in a late number of his well conducted periodical, the *Working Farmer*, "All must have observed that 90 per cent of the fruit is within 18 inches of the ground, while 90 per cent of the vine, containing only 10 per cent of the fruit, grows above this point. Therefore, cut it off with the small tomatoes, and the large ones left will increase in size more than equal in value to the 10 per cent cut off."

Why not study the management of these plants, with the melon, the vine, and others of like habits? It seems to be admitted in all that the power to form perfect fruit or seed is checked by the presence of a wood-growth too active, and that, under one name or another, topping, cutting off, or pinching out, the process of shortening-in is applied as a corrective. Conformity to the requisitions of science would not be the only result brought about by grouping. It would afford fresh facilities for effecting progress in the art and science of cultivation by opening a new field for comparison, whilst every hint gleaned from such a field would swell in importance, because applicable to a whole class, instead of an individual species. Connected intimately with this subject is the question, what leaves are they which in this whole class of plants nourish the seed forms or fruit?—are they those between the points on the annual shoot, where the fruit is located, and the base of the

shoot, or between the fruit and the points of such branch?

In grape culture this is a question of some moment, since in the removal of leaves near the bunches, in order to admit breezes refreshing to the *perspiratory organs* of the berries, it might happen that the apparatus designed to pump in fluids for assimilation by the *digestive ones* was rendered too feeble. Individually, I incline to the belief that the inner are the more important ones, and base my conclusion upon the habits of the grape and tomato, and upon my observations in fruit, and more especially in peach growing, a branch of pomology in which my friends will have it that I am "some;" yet if I know anything on this subject (and allusion to the good opinions of friends is made but to show I might know,) and were called upon to grow a first rate peach, one to charm all beholders and yet prove equally grateful to the palate as pleasing to the eye, I would unhesitatingly choose for the experiment some good looking specimen, located in a healthy portion of some well cultivated tree, pendant at the point of some slender branch, a position in which, when enlarged, it would swing like a plummet before every breeze, where it would linger long after its fellows had articulated and fallen to the ground, gradually receiving the softest and most bewitchingly impressions of beauty by touchings and retouchings of the solar ray upon a perfectly pure and ununsburnt ground; but in a position where it *should do its own pumping of fluids, aided only by a small tuft of leaves waving gracefully near the point of the branch, but above and between the fruit and its sources of food.* L. YOUNG.

DWARF PEARS FOR MARKETING.—A correspondent inquires if it would be profitable to set out a thousand dwarf pear trees, with a view to marketing purposes. The answer must be—If such sorts are selected as have been found durable on the quince; and if good and enriching cultivation is given them—they would probably prove quite profitable. They should be trained as *half standards*, that is, with heads on bare trunks about two feet high. This will prevent the danger of the lower limbs being split off by deep snow, and the only pruning they will require will be a thinning of useless shoots once a

year, and preserving a neat ovate shape to the heads.

It must not be forgotten that the roots of the quince, being smaller and in a more compact circle than those of the pear, need a better supply of the elements of fertility, if the tree is expected to receive its due amount of nourishment. Hence, constant and enriching cultivation must be given.

Among those sorts which have proved durable upon the quince, are Louise Bonne de Jersey, Stevens' Genesee, Angouleme, Glout Moreau, Passe Colmar, Easter Beurre, Beurre d'Amalis, Diel, Doyenne Boussoeck, &c. Many other varieties will grow freely on quince for a few years, but the first good crop of fruit, (even on double worked trees,) exhausts the trees, and they soon languish and die.

There is one great drawback on the profits to be expected from an orchard of dwarf, or of any other pears; this is the danger of loss from *fire-blight*, which to some cultivators, has resulted in as heavy loss as would have been the destruction of their dwellings by fire. Cultivators of the pear should form themselves into a mutual insurance company, for security against this loss.

The inquiry whether dwarf apple trees can be made to afford profitable crops for market, cannot, by any means, be answered so favorably. A tree ten years old will not yield perhaps a tenth part of the crop from an equally well treated standard. We have indeed known a distinguished cultivator to give the opinion, (we shall not say it is strictly correct,) that taking all circumstances into consideration, the average cost of apples from dwarf trees, as now cultivated, is about *five dollars per bushel*. They can be regarded only as curiosities—fancy articles, of which they afford sometimes very interesting specimens.

Answers to Correspondents.

CHRYSANTHEMUMS.—*Edward.* The following are some of the best: Madame Poggi, Fleur de Marie, Temple of Solomon, Celestial, Empress, Lucidum, La Reine d'Or, Campestroni, and Lady Talfourd.

FUCHSIAS.—*Thomas Simson.* The best Fuchsias we have noticed this season, (some being

new and some old,) are Psyche, Gaylad, Son-tag, Devoniana, Corallina, Elegantissima, Eliza Millier, Magnificent, Chateaubriand, and Acteon. *Serratifolia* is a winter blooming variety.

EARLY SPRING PLANTS.—*A Cottager*. You may sow now many seeds in pots, to keep in a garden frame through winter, such as Candy-tuft, Virginia Stock, Nemophylla, Sweet Alyssum, Pansy, which will then bloom early in the year; and in the same way you may have in bloom at the same time, Wallflowers, Primroses, Daisies, Polyanthus, Stocks, Pinks, Carnations, Roses, Columbine, and many others. We will give an article on this subject shortly.

STOCKS.—*Samuel*. The large scarlet stocks which you admired so much in pots, are grown thus: The seed is sown in June, the young plants are transplanted when large enough to move, and by October they have become good sized plants, when they are potted, and kept during winter in a frame or cool green-house.

SALVIA PATENS.—*James Stone*. If you wish to propagate this extensively, you may do so in spring by cuttings, exactly as you do dahlias.

BEGONIAS.—*X. Z.* The Begonia is a hot-house plant, but most of the varieties will thrive very well with green-house culture. Zebrina, Fuchsioidea, Coccinia, and Maculata, are four of the best.

AZALEAS.—*G. T.* The cooler your Azaleas are kept through the winter, so that frost be kept out of the house, the better. So also, your geraniums; and it is wonderful how little water the latter require if a low temperature is kept, by which they will be infinitely benefited when set to work in spring.

ROOT-PRUNING.—*C. F.* Your perplexity in the differences of opinion which as you truly say exist about root-pruning, is not to be wondered at. The reason of this diversity of opinion is easily explained. Where it is practiced by persons who have a competent knowledge of the laws of vegetable physiology it is both beneficial and a safe operation as regards the permanent health of the trees; but when practised by others who have not that knowledge it is frequently quite the reverse. Without writing a dissertation on the subject we can only say, you had better not practice it except in the case of a fruit tree which appears healthy; but which

whilst making strong growth fails to give a crop of fruit. Generally speaking, in such a case it will be beneficial.

POTATOES.—*Charles*. No progress has really yet been made by either the philosophical researches or in the experiments which have been instituted to find out the cause of the potatoe disease. Smees' insect theory has been proved to be quite fallacious. Moisture has something to do, when in excess, in producing it, as may be proved by growing a dozen potatoe in as many large pots in a frame. Of these keep feeders filled with water under six of the pots, and keep the other six rather dry than otherwise. Generally, but not always, those with the feeders under, will have the disease and the others not.

AURICULAS.—*E. S.* Oh yes, we have grown Auriculas here as fine as we ever saw them in England. As you say you have grown them there, all the difference you need make in your culture here, is to keep the plants *entirely* in the shade from the time they go out of bloom until the end of September.

GRAPE HOUSES.—*A. J. R.*, (Middleborough, Mass.) You cannot do better than follow Mr. Rivers' plan, detailed in vol. 6, page 17, except that we recommend you to build the house higher so as to avoid the sunken walk; you will find it more convenient; and we advise you to board both sides of the posts as recommended in the note to page 18, of the article referred to; this will enable you to make the house more useful during winter, because if you take the vines down from the rafters and cover them up, you may then keep out the frost by the stove, and use the house for plants or any other purpose that does not require a high temperature. As to the borders, read Mr. Buist's articles in vol. 5, page 86, and Mr. Chorlton's in the present volume, page 94, both very judiciously written by men who thoroughly understand the subject, and the material details in which our own experience for many years fully confirms. Do not aim at too many varieties in a house the size you name. The Black Hamburgh, the Victoria, the Grizzly Fontignac, and the Muscat will be ample; but plant most of the first named.



1847

Yours sincerely
A. I. Darwin
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THE
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JOURNAL OF RURAL ART AND RURAL TASTE.

The Boundary Line between Horticulture and Agriculture.

“WHAT!” exclaim our readers, “a division between the two primal occupations of man, born of one parent, educated in the same school, with one common purpose, one destiny?” Certainly. By *common acceptance*, gardening and farming are as far asunder as the poles—the zenith and the nadir. And for the simple reason only, that people, in their ignorance, or prejudice, choose to make them so. There has existed, and still exists, in the minds of a great multitude of people, an ideal and insurmountable wall between these twin professions, and which must continue to separate them so long as ignorance and prejudice, instead of light and intelligence, control.

It has been one chief aim of “THE HORTICULTURIST” to familiarize the arts of horticulture, planting, building, and the subordinate occupations attending them, to the attention and understanding of everybody who has at all to do with the cultivation of ground; to carry them into every household, and homestead, and into every farmery in the land—provided their occupants would take and read our paper, and profit by the instruction it contains. Let us examine: The stalwart, plodding, strait-forward farmer, unfamiliar with our pages, looking merely at our title and vignette, imagines it to smell of rose-water and perfume; stitched in a dainty cover and talking some sort of sublimated nonsense, to people who have more money to spend than they know what to do with, and therefore employ it in the erection of all sorts of fanciful buildings for all imaginable and useless purposes; to stock their gardens with all varieties of new and worthless plants, vegetables, and fruits; to plant their open grounds with foreign trees and shrubs, which nobody knows an English name for—in short, to promote the practice and cultivation of things beyond the reach of the ordinary farmer, and useless to either his legitimate occupation or enjoyment.

Now, no honest man ever made a greater mistake. The difference between the two arts of Agriculture and Horticulture, farming and gardening, to employ the

more familiar terms, is not greater than between "*low*" farming and "*high*" farming, as Mr. Mechi, the famous English farmer of "Tiptree Heath," would denominate them. One, the "old-fashioned," slow and easy mode of our fathers; the other, a thorough cultivation and manuring of the soil, stimulating it to the utmost power of production, and consequent profit—the only successful mode of farming in a country with a crowded population and a heavy consumption. "*High*" farming is, in fact, horticultural *cultivation* applied to agriculture. There is no *wall* between these two practices. It is the gradual and agreeable approach from the rough inequalities of surface, in the broken, waste field, to the smooth and grassy turf of the luxuriant meadow.

Every farmer, who *is* a farmer, has his garden of a quarter of an acre and upwards. From this spot he obtains two to five times the amount of consumable vegetables and fruits that any other equal quantity of cultivated land on his farm produces. He knows it too, yet never asks himself the question whether to extend that garden into area of five or ten acres, and put it into choice fruits and fine market vegetables, would not give him a greater profit than to keep the same surface in corn, oats, or pasture, as before, and to do so would require no more skill than his own brain can readily acquire, and his own ingenuity can look after, if he will only take the pains to get a little information. Here, and here only, is the *WALL* between Agriculture and Horticulture—the indisposition to read, examine, and practice for one's self. Plain talk, we admit; but it is also a plain subject to all who choose to understand it.

We have a desire that every American farmer should become, to a degree, a horticulturist—sufficiently so to supply his household from his own farm, with the choicest vegetables and fruits; by the proper disposition and cultivation of trees and shrubbery, and flowering plants, to create a taste and attachment in his family for all rural things, which must add infinitely to their pleasure and their enjoyment, and aid them to reach that destiny which God in his bounty intends for all whom he has placed beneath the sunshine of heaven, and on this favored side of his foot-stool. The study of Horticulture, in what study it requires, is simply an episode in kind of the grand art of Agriculture itself, requiring no extraordinary teaching, but only carrying out and extending, like algebra beyond arithmetic, the nice and more intricate details of the subject. The pursuit of Horticulture requires only thought and attention—not intense at all—but steady and consistent thought, coupled with close application. Every farmer may thus become a Horticulturist sufficient for his own wants, the requirements of his own family, and immediate profit to his estate, if markets, and the conveniences of getting to them, favor him. Our subjects are all intended to be practical, each in their kind; to embrace the wants, the taste, and the fancy of all, from him who "trucks" the product of his own cabbage garden at the nearest market, to the man who erects his conservatories by the thousand feet in extent. Each, all, and every one may find instruction suited to his wants, and by the aid of his own contributions of thought and experience to our pages, he may also edify others in the same laudable pursuit with himself.

Indeed, no system of farming can be complete unless a department of horticulture be connected with the farm. The aid of horticulture is required to give the homestead a character of truth and completeness. A farm may be productive; it may be well and thoroughly cultivated; it may, in well arranged buildings and other sheltered accommodation, give protection to all that live upon it and share in its labors or aid in its emoluments; but the repose, the quietude, the true enjoyment of agricultural life, cannot be had short of an appropriation to the horticultural department. That it is, which more than all else beside, gives expression to the domain, and stamps it with a character of dignity and beauty, and clusters those thousand associations around it, which fill up to perfection the true, as well as the ideal picture of Home.

COL. WILDER'S EULOGY ON MR. DOWNING.

THE annual return of the 28th of July will moisten the eyes and agonize the hearts of many American citizens.

On the morning of that disastrous day two steamers, the *Armenia* and the *Henry Clay*, with numerous passengers on board, start from the capital for the chief commercial port of the Empire State. Like "stately sailing swans," they glide swiftly over the smooth surface of the Hudson. The fire within them waxes warm; their awful energies are roused; they run abreast—anon, the "bird of the West" darts ahead and distances her orient rival. She calls at her landings, swells the number of her passengers, and with fearful velocity bears them onward.

They admire the varied landscapes, the cottages, villas, towns, cities, bold cliffs, and lofty mountains, which have given the scenery about this majestic river a world-wide renown.

They near a city, which rises in beauty and grace from its western bank back to the brow of the distant hill. There is a

"Cottage, half embowered
With modest jessamine, and there a spot
Of garden ground, where, ranged in neat array,
Grow countless sweets."

Its architecture is in the most approved Elizabethan style. Its grounds are tastefully laid out and adorned, and he who named it "Highland Gardens," accurately translated the natural language of the place. It overlooks the city and the river, and commands a view of one of the most extensive and beautiful landscapes in the world. The very site seems designed by nature for the birth place of genius, and for the abode of comfort, taste and learning.

Its proprietor, with his relatives and friends, six in all, take passage in the ill-fated boat. She bears them on toward their port of destination, when suddenly the alarm of fire rings like a death-knell through that floating sepulchre. The passengers are ordered aft, and she is headed for the eastern shore. In a moment all is consternation and horror, which no language can describe, no painter's pencil sketch. Her whole centre is on fire. She strikes the bank two miles below the town of Yonkers. The wind envelopes the multitude on her stern, in smoke and flame. With a fearful odds in the chances of escape,

* Pronounced before the Pomological Congress at Philadelphia, September 13, 1892.

the Great Destroyer offers them their choice between a death by flame, or a death by flood. Alas! on some he inflicts both; they are first burned and then drowned!

They are driven before the devouring element, and entrust themselves to the mercy of the waves. Admidst the crowd at the stern, stands a man of tall and slender habit, and of thoughtful expression, whose penetrating eye surveys this perilous scene, and seeks the most favorable chance of escape. His accustomed self-possession fails him not in this awful extremity. He imparts wise counsels for personal preservation to his friends and those about him; then climbs to the upper deck for articles from the furniture of the boat, on which they may float to the shore. He returns, but his beloved wife and part of his company have already been driven overboard. He commits the rest, and last of all himself, also to the fatal flood,

"Forlorn of heart, and by severe decree
Compelled reluctant to the faithless sea."

They sink; they rise. With the grasp of death they cling to him and again submerge him and themselves in the waves. He brings them once more to the surface and beats for the shore. Alas! it is in vain; his efforts to save others peril his own life. Entangled, exhausted, and disabled, he sinks to a watery grave.

But the partner of his life, her sister and brother, who were mercifully rescued from the jaws of death, are still unapprised of his melancholy fate, and search for him in vain among the agonized survivors. But the cry, she sinks! she sinks!! fills their hearts with direful apprehensions. Still they cling to the delusive hope that he may be among those rescued by the rival Armenia and borne to the city of New-York.

The object of his conjugal love returns to her desolate home. The tidings of this awful disaster fly upon the wings of the wind; the mystic wires tremble at the shock; the press utters its loud lament; the note of woe rings through our streets, fills our dwellings and convulses our hearts with grief. The nation mourns, minute guns are fired upon the spot to arouse the inhabitants of the surrounding country, and to start the dead from their lowly rest. Multitudes rush from every quarter to the mournful scene; they crowd around each body as it is raised and brought to the shore, to identify therein a relation or friend. Among them his brother and partner in business arrive. At length another body is raised. Its countenance is familiar; it is recognised; and at last the melancholy announcement is made that ANDREW JACKSON DOWNING is no more.

"Lovely in death the beauteous ruin lay."

His precious remains are borne back to their native city and to his house of mourning. There they meet his widowed wife, whose ear, during the fourteen years of their wedded life, had been so quick to catch the sound of his returning footsteps, and who had been the first to greet and welcome him. Alas! she is suddenly bereft by one fatal blow, of friend, mother, husband! The funeral rites are performed; his body is committed to the tomb, "earth to earth," "ashes to ashes," "dust to dust!"

Thus terminated the earthly career of our lamented brother and associate. But his name shall be perpetuated by fragrant flowers and delicious fruits; by gushing fountains and murmuring streams; by grateful shade and balmy breeze, and by many a rural scene, and many a tasteful home. He shall be remembered

"Where cottages and fanes, and villas rise;
Where cultur'd fields and gardens smile around."

But to be more specific, the results of his toil appear in the forests which he has preserved from the merciless axe—in the trees which he has described and made to contribute more abundantly to the taste and comfort of their proprietors—in the avenues which he

has adorned—in the lawns and pleasure grounds which he has laid out and appropriately embellished—and in numberless buildings which stand as monuments to his architectural skill.

The fruits of his labor are also gathered in thousands of gardens and conservatories. The numerous cottages and villas which have lately sprung up in the towns and villages about our commercial cities, and throughout our happy land, evince his genius; and it is due to his worth to say that few have left a mark so deep and broad on the generation in which they lived.

In responding to the calls which have been made upon me to pronounce the eulogy of our deceased friend, I shall attempt nothing more, and certainly can do nothing better, than to articulate the language of his useful life, and to give free utterance to your own convictions of his worth.

MR. DOWNING was born in Newburgh, N. Y., on the 31st day of October, A. D., 1815. In his boyhood he manifested a fondness for botany, mineralogy, and other natural sciences, which at the age of sixteen, when he left school, he was able to prosecute without the aid of an instructor. At that period, his father having died when he was but seven years of age, his mother desired him to become a clerk in a dry goods store; but he, following the native tendencies of his mind, preferred to remain with his elder brother in the nursery and garden, whose accuracy and practical skill in horticulture gave special prominence to the same traits in the deceased, and with whom he might study the theory, and perfect himself in the practice of his favorite art.

In the formation of his character, we also recognize with gratitude the agency of Baron de Liderer, the Austrian Consul, whose summer residence was in his native place, a gentleman of large endowments and attainments, of eminent purity of mind, and refinement of manners, a mineralogist and botanist, who discovered in young Downing a mind of kindred taste, who made him the frequent inmate of his family, as well as his own companion in numerous excursions for the scientific exploration of the surrounding country.

But his sensibility to artistic beauty was cultivated and developed by the lamented Raphael Hoyle, an English artist, residing in Newburgh, and who, like himself, went down to an early grave, leaving behind him specimens in landscape painting, true to nature, and of remarkable delicacy of coloring. His manners were much improved and adorned by his familiar intercourse with his neighbor, Mr. Edward Armstrong, a gentleman of refinement and wealth, at whose fine country seat on the Hudson he was introduced to the Hon. Charles Augustus Murray, an Englishman whose book of Travels in America has been admired on both sides of the Atlantic. There he also made the acquaintance of many other distinguished men, who subsequently became his correspondents and personal friends.

These associations had, no doubt, much influence in strengthening his refined and generous nature. He devoted all the time which he could reclaim from physical labor to reading and study. In the bowers of his garden he held frequent converse with the muses, who inspired him with the poetic fire which illumines his pages, and imparts peculiar vivacity and energy to his style.

At the age of twenty-two, on the seventh of June, 1838, he married Miss Caroline Elizabeth, daughter of J. P. DeWint, Esq., of Fishkill Landing, a lady of congenial spirit, of refinement and intelligence, to whom the world is much indebted for his usefulness. In grateful return for her valuable services, she now enjoys the commiseration and condolence of his friends in America and transatlantic countries. But with all these aids, still Mr. Downing was, in the strictest sense, *self-taught*; a fact which deserves to be recorded, not only to his praise, but as an encouragement to thousands of aspiring youth. If he

was never a pupil in the studio of an artist; if he studied natural science in the laboratory of nature more than in the school of scientific chemists; if he enjoyed not the advantages of a liberal and professional education, valuable and desirable as these means of improvement certainly are, yet he was at all times and everywhere a learner; and the lessons of wisdom which he received, he promptly reduced to practice; a circumstance which made him eminently practical and national, *a man of his own age and country.*

I will illustrate his habits of observation and study. In a walk he plucks from an overhanging bough a single leaf, examines its color, form and structure; inspects it with his microscope, and having recorded his observations, presents it to his friend, and invites him to study it, as suggestive of some of the first principles of Rural Architecture and Economy.

Does he visit a beautiful country seat, he sketches a view of it, and of the grounds about it; notes whatever is true to nature, accurate in taste, or excellent in design; and from his copy a plate is engraved, and in the next number of his Horticulturist the whole scene, with his valuable comments, is given to the lovers of the landscape and the garden.

He returns from the forest. A short extract from his journal will explain the object of his tour, and afford a fair specimen of the beauty and force of his style:—

“Nature plants some trees, like the fir and the pine, in the fissures of the rock, and on the edge of the precipice; she twists their boughs, and gnarls their stems, by storms and tempests—thereby adding to their *picturesque* power in sublime and grand scenery. But she more often develops the *beautiful* in a tree of any kind, in a genial soil and clime, where it stands quite alone, stretching its boughs upward freely to the sky, and outward to the breeze, and even downward to the earth, almost touching her in her graceful sweep, till only a glimpse of the fine trunk is to be seen at its spreading base, and the whole top is one great globe of floating and waving luxuriance, giving us as perfect an idea of symmetry and proportion as can be found short of the Grecian Apollo.” “One would no more wish to touch it with the pruning knife, the axe or the saw, (unless to remove a decayed branch,) than to give a nicer curve to the rainbow, or to add freshness to the dew-drops.”

This description, for beauty, power of diction, and for fullness of nature, not only harmonizes with the pictures, but even rivals the finest touches of the pencils of Claude, Poussin, Salvator Rosa, or any other great master of landscape.

He makes a tour of New England, and stops at New Haven, the city of elms. He walks out from the Tontine upon the green, admires those grateful shades, their majestic form, their gracefully waving boughs, and they revive in his mind the history of the elm, its varied use for fuel, timber, and shade. He arrives at Hartford. The first object of his attention is the “Charter Oak.” He hastens to visit it, stands before it, all filled with veneration, exclaims, with the bard of Manna, translated by Dryden,

“Jove’s own tree,
That holds the world in sovereignty!”

He sketches it, gives you a copy of it in his “Landscape Gardening,” together with his classical and scientific account of the King of the American forest. He journeys up the beautiful valley of the Connecticut to Stockbridge, Massachusetts, whose streets are lined with the sugar maple, “clean, cool, smooth and umbrageous.” He there increases his love and admiration of the American maple, the beauty of whose vernal bloom is surpassed only by the unrivalled hues of its autumnal foliage, dyed with the tints of departing day.

By scenes like these, and by scientific reflection thereon, he prepares himself to give

those last and well directed blows at the "*heavenly*" tree, the Ailanthus, and also at the Abele Poplar—both of which he kills off in a most *celestial* manner, to make room for the more deserving and truly American Maples, Oaks, Elms, and Ashes, for the Magnolia, the Tulip and others. Of the latter, how beautifully he speaks in the last leader from his pen, in a manner so easy and flowing, and so characteristic of the man. "We mean the Tulip tree or the Liriodendron. What can be more beautiful than its trunk, finely proportioned, and smooth as a Grecian column? What more artistic than its leaf, cut like an arabesque in a Moorish palace? What more clean and lustrous than its tuft of foliage, dark green and rich as deepest emerald? What more lily-like and spacious than its blossoms, golden and brown shaded? And what fairer and more queenly than its whole figure, stately and regal as that of Zenobia?"

In the progress of his journey, he reaches the commercial metropolis of New-England. It is the annual exhibition of the Massachusetts Horticultural Society of that city. He enters its Hall, is greeted with a cordial welcome, and invited to examine its collection, particularly the extensive show of pears. In a subsequent discussion with its fruit committee, he proposes to them a question in his direct, practical and impressive manner,— "Will each of you please to give me the names of the best three varieties of the pear, together with your reasons for that preference?" He obtains their opinions, and publishes the same, puts the public at once in possession of their long and dear bought experience.

The same practical and studious habit is remarkably exemplified in his foreign travels. Unlike other tourists, who first visit the Tower of London, or Westminster Abbey, he hastens from the parks of that city to Chatworth, then to Woburn Abbey, Warwick Castle, and other places where agriculture, horticulture, architecture, and all the fine arts have for ages vied with each other in whatsoever is ornamental in embellishment and princely in wealth, and where are scenes of natural and artistic beauty and grandeur, which attract the chief masters of the world. He is received and entertained with kindness and partiality, by the Earl of Hardwicke, the Dukes of Devonshire and Bedford, and others with whom he formed many warm friendships in the mother country. From these places, where wealth, art, nature and genius, have congregated whatever is most beautiful to the eye, most approved in taste, or most impressive to sensibility, he prosecutes his journey; everywhere observing, noting and studying the objects and scenes about him. To him, *not a tree, a plant, a leaf, a blossom, but contained a folio volume.*

We have necessarily amplified this part of our subject in order to give a correct view of the manner and extent of his education, of the peculiarities of his style, and of the formation of his character, and to furnish the materials for a just appreciation of his worth, and for a philosophical judgment of himself and of his works.

Mr. DOWNING was just what we have represented, a *self-taught* man. His name will appear in all coming time, emblazoned upon the roll of fame, among such worthies of that class as Roger Sherman, Benjamin Franklin, David Rittenhouse, Benjamin West, and Nathaniel Bowditch. He was not, perhaps, so profoundly scientific, yet he was well grounded in vegetable physiology, and in the first principles of the arts to which his life was devoted. Being the sovereign of his own powers and acquisitions, he could instantly bring them to bear on the subject of his investigation or discourse.

In his character we find that assemblage of virtues commonly called *amiableness*. On this depended the suavity of his manners, the sincerity of his friendship, and the freedom of his hospitality. His guests always received a hearty welcome, and found at his residence a quiet home. Here Miss Bremer, whose fame in letters is like that of the Swedish nightingale in song, wrote the introduction to one of her works; and in speaking of

his kindness and hospitality, she says: "I never shall forget, nor ever be able to fully acknowledge them, feeling as I here do at this moment, all the blessings of a *perfect home*."

He also possessed, what is rarely found in combination with these qualities, *keen perception, great energy, decision and boldness*. Blessed with an almost intuitive perception of character, he read men at a glance. When he was in London, he desired an assistant who would return with him to America, and aid him in the architectural department of his business. He visits the architectural exhibition in that city, and seeks an introduction to the secretary of that association, to whom he reveals his object, and by whom he is introduced to Mr. Calvert Vaux, as a gentleman well qualified for the place. They exchange references; and so readily did he inspire confidence in this stranger, and also perceive that he might safely repose the same in him, that on their interview the next morning, he concludes a contract, agrees upon the precise time when they will start from Liverpool for America, hastens to Paris to complete his unfinished business, fulfills his engagement, and in two weeks they are unitedly prosecuting their labors at Newburgh. Such was his activity, promptness, and despatch.

The increasing extent of his business would have employed several common men; his correspondence alone would have occupied a private secretary; yet the number and urgency of his duties never depressed him, never confused him, never made him in a hurry, because he was always the *master*, never the *slave* of his business.

Having once thoroughly investigated a subject, he rested with confidence in his conclusions, and published the same with a boldness which arrested attention and commanded respect. Witness his just condemnation of "*white houses*" amidst rural beauty, a color which no master of landscape would dare to transfer to his canvass, yet which is as common in the country, as it is opposed to economy and good taste. Witness also his condemnation of the impure air of stove heated and unventilated dwellings, air which, with equal truth and propriety, he denominates "*the favorite poison of America*." This article, copied by numerous journals, read by thousands, and commending itself to their common sense, is fast producing a reform, conducive alike to health, comfort and long life. But his *kindness* and *magnanimity*, his freedom from envy and jealousy, enabled him to admire and commend whatever was excellent and praiseworthy, as freely and decidedly as he condemned their opposites. These characteristics are exemplified in his monthly reviews of the press, and in the notices of the works of other writers, which appear in his volumes.

In a word, Mr. DOWNING was in manners modest, polite and gentlemanly,—in perception of fitness and propriety intuitive,—in taste accurate and refined—in tact and practical skill *remarkable*—in love of country strictly national, *American*—in sentiment pure—in life incorrupt—in most respects a *model man*—in all, *nature's own child*. It has been justly said of him, "at whatever point of view we regard him, we are compelled to admire the symmetry of his character, the vigor of his mind, the versatility of his talents, and that healthful flow of enthusiastic feeling which marks his writings. There are those who can work out beautiful thoughts in marble, who can clothe them in the touching language of poetry, or bid them flow in the rounded periods and convincing strains of oratory; but few minds seem more fully possessed of the power to add by art to the beauty of nature, and make the dessert blossom like the rose."

His writings are a faithful transcript of his own character. If his diction sometimes contains unusual and even strange words and phrases, possibly ungrateful to some classic ears, the worst which enlightened criticism can say of them is, that they subordinate

elegance to originality and force. But his language is generally pure, chaste and refined, not unfrequently beautiful and highly ornate. His style is peculiarly his own, and rigidly methodic, sometimes abrupt, but always versatile and flowing. It is remarkable for that of which he was passionately fond in nature, and to which, with some latitude of expression, we will appropriate the word "*picturesque*."

A single quotation will truly illustrate our meaning, and also these qualities of his style. We select the words with which he introduced the Horticulturist to his readers with the first breath of summer. "Bright and beautiful June! embroidered with clusters of odorous roses, and laden with ruddy cherries and strawberries, rich with the freshness of spring, and the luxuriance of summer—leafy June! If any one's heart does not swell with the unwritten thoughts that belong to this season, he is only fit for "treasons, stratagems and spoils." He does not practically believe that God made the *country*. Flora and Pomona, from amid the blossoming gardens and orchards of June, smile graciously as we write these few introductory words to their circles of devotees. * * *

Angry volumes of politics have we written none, but only peaceful books, humbly aiming to weave something more into the fair garland of the beautiful and useful, that encircles this excellent old Earth." Such passages enliven and adorn his works.

Of these we can give but a brief account.

The first is his "Landscape Gardening," which introduced him to the literary and scientific world, and gave him a rank among the distinguished writers of the age. For years previous to its publication, he seemed retired from the world, abstracted and absorbed, but in reality, he was occupied in intense study of his subject. When he mastered it, and adapted its principles to American climate, scenery and people, he published it on both sides of the Atlantic.

Think of this young man, at twenty-six years of age, without the advantage of a liberal education—with no precedents to guide him, with only a few practical hints from such men as Parmentier, seizing upon the first principles of this science in the works of Repton, Price, Loudon and others, with a comprehensiveness of mind, with a power of analysis, an originality and fixedness of purpose that would have done honor to the first scholars in other departments, popularizing and appropriating them to his own period and country, and actually producing a book which becomes at once a standard universally acknowledged by his own countrymen, and praised by Loudon, editor of "Repton's Landscape Gardening," who pronounced it "a masterly work," and after quoting ten pages, to give his English readers an idea of its excellencies, remarks, "We have quoted largely from this work, because, in so doing, we think we shall give a just idea of the great merit of the author." This work the celebrated Dr. Lindley critically reviews, in sundry articles in his Gardener's Chronicle; and while he dissents from it on some minor points, yet in respect to its cardinal excellencies, he thus remarks: "On the whole, we know of no work in which the fundamental principles of this profession are so well or so concisely expressed." And in regard to Mr. DOWNING's explanation of this science, and his general definition of it, he adds, what is equally complimentary to our author, and to American genius, "no *English* Landscape Gardener has written so clearly, or with so much real intensity."

Closely allied to this science is the subject of Architecture, to which our author next turns his attention; and in the following year he publishes his "Cottage Residences." Of this work Mr. Loudon also observes, "This book is highly creditable to him as a man of taste and an author, and cannot fail to be of great service." This latter work, in time, creates occasion for his "Architecture of Country Houses," including designs for Cot-

tages, Farm Houses, and Villas, with remarks on the interiors, furniture, and the best modes of warming and ventilating.

Of these, the English and American press offer remarks so similar to those which we have already submitted on his *Landscape Gardening*, as to supersede the necessity of much amplification. We select the closing words of an English review of one of these works:—

"We stretch our arm across the 'big water' to tender our Yankee coadjutor an English shake and a cordial recognition." We will add two examples of the American estimate of these productions. Says a gentleman resident on the Atlantic shore, who is eminently qualified to form an enlightened judgment:—"Much of the improvement that has taken place in this country, during the last twelve years in Rural Architecture, and in Ornamental Gardening and Planting, may be ascribed to him." Another gentleman, equally well qualified to judge, speaking of suburban cottages in the West, says:—"I asked the origin of so much taste, and was told it might principally be traced to DOWNING'S Cottage Residences and his Horticulturist."

Of his remaining works, the "*Horticulturist*," his monthly journal, which has entered its seventh year, is extensively celebrated for its appropriate, interesting and eloquent leaders—for its numerous and able correspondents—for its varied learning and ripe experience—for its just and faithful reviews—and for its tasteful embellishments and rural decorations.

His "*Fruits and Fruit Trees of America*,"—a volume of six hundred pages, was printed in 1845, both in New-York and London, and in two different forms—the duodecimo with lineal drawings, and the royal octavo, both with these drawings and with colored engravings. It has passed through thirteen editions, and originally combined his personal observation and experience with those of other American fruit growers down to that date.

Besides these productions of his pen, he edited, with notes and emendations, "*Mrs. Loudon's Gardening for Ladies*;" also, "*Lindley's Theory of Horticulture*;" delivered various addresses; submitted reports to public bodies, and contributed numerous articles to the secular, literary and scientific journals of his day.

In addition to these labors, he rendered efficient services to the cause of agriculture and agricultural education. He constantly superintended his homestead—was a corresponding or active member in many horticultural and kindred associations—was influential and prominent in the establishment of this Congress, and from its origin chairman of its fruit committee—the author of the "*Rules of American Pomology*," which, with some modifications, have been extensively adopted. He advised and aided in the laying out of grounds, in the plans and specifications of various private and public buildings, and at the time of his death, not only had contracts for important professional services in Newburgh, Newport, Georgetown, Albany, Boston, and other places, but was actually on his way to Washington to prosecute the business in which he had been engaged by the national government, for the laying out and adornment of the public grounds in that city. He had also projected several new volumes in the departments of his peculiar studies and labors, as well as the revision of some of his present works. The last effort of his pen was a postscript to a set of working plans to illustrate a design for an observatory proposed to be erected in one of our principal cities.

Alas! that one so eminently useful, with such brilliant prospects before him, and whose place it is so difficult to fill, should be so suddenly removed! Such is the common exclamation! But this general sorrow may find consolation in his own devout words, in a

letter of condolence addressed to me a few days before his death. They seem prophetic of this hour. "God knows what is best for us."

This dispensation is indeed mysterious; a wonder of Providence such as the All-wise and Infinite rarely permits. He takes away one to whom we are most attached, and that, too, when we can least afford to spare him. But let us hope that this melancholy event may awaken public attention, and direct it from the man to his pursuits and to their connection with the public welfare, and thus become the occasion of raising up men to carry out and consummate his worthy enterprise.

We have thus spoken of the last hours of our lamented friend—of the dreadful catastrophe which terminated his earthly career—of the circumstances and influences in which his character was formed—of its most prominent and commanding features—of the great events of his public life—of his published works—and of his plans of future usefulness.

As your humble servant, appointed to speak of his "life, character, and virtues," it is not proper for me to indulge personal and private partiality. It has been my endeavor to form such an enlightened judgment of his worth, and such an unbiassed estimate of his numerous excellencies, as shall be in harmony with your own opinion, and shall command public confidence and respect. The duty we perform is without any expectation of adding to the lustre of his fame. His works are his best eulogy—the most enduring monuments of his worth.

But he has gone! His seat in this Congress is vacant! Another will make the report which was expected from him! We shall much miss his wise and leading counsels in our deliberations and discussions, his prompt and energetic action in our endeavors to advance the worthy objects of this association, in the origin and progress of which his agency was so conspicuous. He has gone! He is numbered with those patrons and promoters of the ornamental and useful arts who rest from their labors;—with the erudite and sage Pickering, the wise and laborious Buel, the ardent and scientific Mease, the humorous and poetic Fessenden, the practical and enterprising Lowell, the tasteful and enthusiastic Dearborn, the indefatigable and versatile Skinner, the scientific and voluminous Loudon, and others of noble design and enduring fame. These have fallen around us like the leaves of autumn; and Providence now calls on us to inscribe on that star-spangled roll the cherished name of DOWNING, struck down suddenly when his sun was at the zenith of its glory.

He rests in the bosom of his mother earth, in the city of his birth, and the sepulchre of his fathers, on the banks of that beautiful river where his boyhood sport, and where the choicest scenery inspired his opening mind with the love of nature—a spot which will be dear to the thousands of his admirers, and which our love to him will constrain us to visit. We may resort to his hospitable mansion, but he will no longer greet us with his cordial salutation, nor extend to us the right hand of fellowship. We may wend our way through his beautiful grounds, but he will not be there to accompany us. Instead of his pleasant and instructive voice, which once dropped words of wisdom and delight on our ear, we shall hear the trees mournfully sighing in the breeze—the cypress moaning his funeral dirge, and the willow weeping in responsive grief, "because he is not." "His mortal has put on immortality."

When we think of the place which he occupied in the hearts of his countrymen and cotemporaries—of the expanding interest which he has awakened in the rural arts, the refinements and comforts of society—of his unfinished plans, which others, inspired by his genius, will unfold and consummate—and of his works, which will be admired when the tongues that now praise him shall be silent in death, our sense of justice accords to

him an early immortality—a fame which history will cherish, art adorn, and grateful posterity revere.

He is dead, yet how little of *such* men can perish! The clayey tenement may indeed fall and crumble, but to him who dwelt in it, a place is assigned in the firmament of American genius, far above the storms and convulsions of earth—"in that clear upper sky," where he shall shine forever to illumine the path of intelligence, enterprise and virtue, and henceforth to enkindle in the human mind a love of order, taste and beauty. We rank him with those who start improvements which advance ages after they are dead, and who are justly entitled to the consideration and gratitude of mankind. Washington and his illustrious associates are dead; but the liberty which they achieved still lives, and marches in triumph and glory through the earth. Franklin is dead; but the spark which his miraculous wand drew from heaven, speaks with tongues of fire and electrifies the globe. Fulton is dead; but he awoke the spirit of invention which turns the machinery of man—aye, and he awoke also the genius of navigation.

"And heaven inspired,
To love of useful glory roused mankind,
And in unbounded commerce mixed the world."

DOWNING also is dead; but the principles of artistic propriety and ornament, of rural economy and domestic comfort, which he revealed, await a more full and perfect development; and as they advance towards their glorious consummation, grateful millions shall honor and cherish his name. HIS MEMORY SHALL LIVE FOREVER.

HORTICULTURAL EXHIBITIONS.

THE season of our principal Horticultural Exhibitions for the year is just concluded, and a few words upon them may not be altogether useless. We have, in truth, been much gratified by the aspect of those at which we have had the opportunity to be present, (and we doubt not that those of our readers who have attended them, will agree with us in opinion,) that the exhibitions of the present year have shown an onward movement, which testifies plainer than any other evidence can do, that our progress in every department of cultivation, whether fruit, flowers, or vegetables, is highly satisfactory. In every branch, the state of perfection in which the generality of exhibitors have brought their several productions to the contest, has been very good, and after making allowances for the diversity of localities, and the contingencies consequent on the weather upon some things, we have seen quite enough to satisfy us that many intelligent minds are engaged, and careful hands at work, to develope and apply the many advantages which this country so amply possesses, for growing all products of the earth in that high degree of luxuriance and perfection, which the judicious union of art in aid of nature's efforts, can alone effect.

Our object at present is not, however, to generalize in useless speculation, or to indulge in the lengthened expression of satisfactory anticipations as to the future; but to make some remarks upon the comparative degrees of excellence which have been manifested in some of the various departments of horticulture, with the view to offer a few suggestions for the consideration of exhibitors.

Uniformly, we have found the fruit at all exhibitions, as a whole, highly creditable to our fellow laborers in the science; and forming, as it does, one of the most important branches, this is the more commendable in them. The specimens of many varieties of

foreign grapes have been shown on several of their exhibition tables in condition, which leaves nothing to be desired; and we question whether finer samples of this fruit have ever graced the hospitable board of any of our readers. In point of size, the bunches exhibited have generally been satisfactory; and seeing that the culture of the foreign grape under glass, to any extent among us, may be said to be comparatively of recent origin, it has gratified us to find them usually shown with such evenly sized berries. There is one caution which we must nevertheless give some of our young grape growers, (a class that we have reason to know is now every day largely increasing in number,) and that is, not on any account to cut for exhibition a bunch of grapes that is not *fully ripe*. We have observed in many instances this year, individual bunches which were not ripe, placed with others that were perfectly so, and in some cases we have seen that this defect has been overlooked, or rather disregarded by the judges, and premiums have been awarded for them. Now this should not be. We know full well, from considerable past personal experience, that it is a very disagreeable duty in judging at Horticultural Exhibitions, to be under the necessity of putting aside and disqualifying that which, as a whole, is a fine collection of fruit, on account of some defect, such as unripeness in a portion of it; or perhaps for some other requirement, which a little more time would have remedied; and which was not altogether a fault arising from any controllable defect in cultivation. We know that in such cases, to say nothing of the disappointment and dissatisfaction frequently produced, the cause even of the rejection is, to young cultivators, often unknown; and that discouragement and discontent thence produced, sometimes induce the exhibitor to decline to take part in future trials of skill. But, however unfortunate this is, the judges should never allow such considerations to influence them. The very object of all parties engaged is the attainment of perfection in the pursuit; and although we know that it is in degree alone, and not in the full sense of the term, that this can be obtained; yet certain and distinct *minimum* limits of excellence should be laid down and adhered to, below which no subject of competition should be receivable. For it will be evident, upon consideration, that unless this be done, on the one hand, the very object of the discouragement of mediocre culture will be defeated, and on the other, the stimulus to exertion to reach a high standard of excellence, will be to a great extent taken away. A far preferable mode for judges to adopt, whenever the general appearance of the subject of competition would appear, as compared with others exhibited, to entitle it to a premium, but which it is disqualified from receiving on account of defects or deficiencies not readily apparent to the inexperienced eye, is for the judges to attach a paper with a short note of the reason, thus, "*Disqualified by the judges on account of * * ** —." This will always testify that the judges have not been negligent in the discharge of their duty; and will generally reconcile the unsuccessful candidate himself to his misfortune. He will regard the paper as tantamount to a testimonial by the judges in favor of the general good results of his exertions, and his vanity, (or perhaps commendable pride,) will not be wounded; and the consolation which he derives from the idea that but for the one mischance, he would have obtained the reward of his care and skill, neutralises the feeling of disappointment at its loss; and he resolves on more circumspection in future.

Our Boston friends who have so well earned, and so long claimed a pre-eminent position amongst us in pear culture, will, we are well assured, join us in congratulating our cultivators something farther south, at their success this season. In numerous instances we have seen a considerable increase this year in the number of good varieties exhibited by the New-York and other growers. Doubtless every year adds to their experience as to the particular varieties suited to their locations in our varied climate, and to this the re-

sult alluded to is in a great measure to be attributed. Our advice to pear amateurs is, rather to aim at confining themselves to such varieties as, upon a fair trial, are found to afford satisfactory results, first and principally, as regards flavor and quality, and secondly as regards the average crop, than to increase numerically the varieties they grow. In our opinion, the rapid advances now making in horticultural chemistry, may, at no very distant period, open to us an arcana in the laws immediately applied to the texture and the flavoring of fruits, which may enable us by-and-bye to influence these particulars to a degree at present perceptible but dimly, if at all, only in that vista of the scientific future, which those alone who are laboring silently but nevertheless ardently upon the subject, at present dare glance into.

Those who remember what our hot-house and green-house plants were ten years ago, must have gazed with unfeigned pleasure upon the many fine specimens which have this year decked the tables of our exhibitions in all parts. The improvement in the beauties of the courts of Flora, have been as marked as have those in the domains of Pomona. Of the rival queens, however, we think the latter has the greater number of successful votaries, as respects the quality, although not perhaps as regards the number of them. For though much indeed has been done, and most worthily, in floriculture, yet much remains to be done.

The time was, and is not yet so far left behind as to be out of our remembrance, when the laws of vegetable physiology were so little known, and the principles on which successful pot culture depends, had been so imperfectly studied, that it was considered an impossibility to grow an exotic plant in a pot, with any approach to the perfection which the same species attains in its natural habitat. At present, although it may be too much to affirm that under the management of a first rate cultivator, exotics can be grown in greater perfection than they arrive at in the place assigned to each particular species by nature, yet may it, with great truth, be asserted that we do see, under the best cultivation, a degree of beauty and vigor, imparted to many species which, owing to adventitious circumstances, (as the extremes of meteorological changes and other contingencies,) we seldom see in the same species when found in its native wilds. This consideration deserves to be often made the subject of our recurring thoughts; because, while in one point of view, it should operate as a stimulus to prosecute our experiments in the perfection of such species as hitherto have been but indifferently cultivated; in another, it should remind us that we must not seek by an undue measure of those stimulants, on which, frequently, our success depends, to push the constitutional habits of a plant beyond its legitimate development. For although we cannot agree with the pure botanist who condemns our development of the beauties of double flowers on the ground of interference with his systematic arrangements; yet we have seen the injudicious persistence in a mode of culture, which to a given point was most successful, continued until the heterogeneous results produced, led from a misconception of their cause, to the abandonment of that which, legitimately practiced, was the correct course of culture.

As connected with horticultural displays one of the greatest advantages, which the improved culture of the last few years has imparted to them, is the more natural mode of training and pruning hot-house and green-house plants. Formerly, every exotic climbing plant was seen tied down and cramped by a frame work, so as to leave the mind of the unscientific spectator in doubt whether the frame was a part of the plant or not. Well do we call to mind some time back, being at an exhibition with a friend, who was a skilful landscape painter, and consequently possessed a ready perception of the beautiful in nature, who, when admiring a fine plant of *Maurandia Barclayana* which had been tortur-

ed into covering a flat surface like a stable door, exclaimed, suddenly, "How beautiful! What a pity we have not a *climbing plant like it!*" Upon our explaining to our friend his mistake, his reply was, "Is it possible! What a barbarian the gardener it belongs to must be; but I am glad to find my perception of truth in nature is correct; depend on it *she* makes no mistakes whatever gardeners may do." Our friend was right. Then again every green-house shrub was cut and trimmed into some domelike or conical shape, and the very beauties arising so strikingly from the varied habits of growth in different families of plants was destroyed, and a monotonous symmetry produced which tended rather to weary the senses by its precision than to please them by its uniformity. And although to a considerable extent the evil complained of is got rid of, still we see enough of this very important error of by-gone days remains to warrant us in calling attention to it and pointing out the wrong principles of taste upon which it rests.

Undoubtedly this habit of cutting plants in particular shapes, arose at a time when plant structures for the culture of exotics were themselves in their infancy; and when a much larger number were crowded into them, owing to the imperfect state of knowledge as to the requirements of light, air, and ventilation, as materially important agents towards success. And this economy of room, added to a quaintness of style which in those early days of gardening, also prevailed in the treatment of out-door pleasure grounds, doubtless induced this unnatural and inharmonious mode of adapting plants to their habitation instead of adjusting the latter to them.

It should be ever borne in mind that the very object of exotic plant growing, is to associate with ourselves for our enjoyment and use, those native beauties of other climes, which we cannot otherwise see, or having seen, are desirous to appropriate to the ministration of our continuous enjoyment; and therefore that in their culture we should endeavor to adjust their treatment to their habits of growth in a state of nature; for (as it has been well remarked) although a strict adherence to the natural conditions of a plant in its wild state will frequently not be, in all particulars, suited to its culture under the guidance of art, yet no system of art culture will be successful, in which those natural conditions are wholly disregarded. The object in pot culture should be to produce a luxuriant growth, and then to observe and conform to the constitutional requisitions of our plants as to their periods of rest and activity. The pruning of them should, in the early periods of their growth, be regulated by the design to produce a sufficiency of branches, so as to give us a well furnished specimen of the species; but when approaching its maturity as a worthy denizen of our green-house, we should allow the plant to assume its natural growth, taking care that too many branches are not left to crowd each other, and thereby prevent their perfect development. Every green-house shrub so treated, and being in vigorous health, cannot fail to present at once an object of natural beauty and of true symmetry. It is of course admitted that climbing plants must necessarily have some support; but instead of the adoption for this purpose of special forms unknown to the vegetable world, it will be found in the great majority of cases, that the most elegant object will be presented by allowing them to run over the twigs of a branch of some deciduous shrub, placed for the purpose as a support, upon which, slight attention in occasionally directing the tendrils and young shoots, will induce it to twine with all the airy gracefulness of natural growth.

In orchideous plants there is a wide field unoccupied in our middle and northern states into which we hope to see soon many amateurs step forward with earnestness of purpose. There is we know a general and vague idea that these families of plants involve a quantity of labor and expense, to say nothing of the extraordinary skill, which people are un-

willing to undertake. But in this supposition there is much misconception. It is quite true that a competent knowledge of the peculiarities of treatment is required, because they, like heaths, and some families of green-house plants, have fixed habits which cannot be transgressed with impunity; but those fixed laws are few and soon known, and moreover they involve no great difficulty in acting upon. European orchid growers have difficulties of climate to contend against that we are free from, and with us their growth is comparatively easy. It is an erroneous supposition to fancy that a high temperature is uniformly necessary for their successful cultivation. What they do require is a powerful sun *at times*, and in this country they have it in as considerable a quantity, as many of the most beautiful amongst them have it in their native habitat.

We hope some of our amateurs will be induced to try a few of the common species, and we doubt not their unlooked for success will induce them to go on with these magnificent jewels of nature's toilet.

The portions of our exhibition tables devoted to vegetables, have literally groaned under the weight of the valuable varieties with which they have been covered; and have borne ample evidence of good culture and well directed skill. Still at no exhibition that we have attended, has there been any difficulty in detecting the marked difference between the well tended crop, and its less lucky competitor. The fine clear skin of the full swelled tuber, tells us unerringly the tale of its careful and intelligent master's toil, as does the well bloomed geranium. But we must draw our remarks to a close, wishing to all exhibitors, "honor to whom honor is due."

B. M.

WHY DO PLANTS DETERIORATE?

BY W. W. VALK, M. D., FLUSHING.

THIS question has been often asked, and occasionally we have been favored with an answer; each respondent proposing his own theory, and sustaining it by such facts and arguments as appeared to him both reasonable and conclusive. By some writers the plant was supposed to *exhaust* the soil of all its proper nutriment, in a greater or less time; consequently, when that failed, it became unhealthy, and sooner or later perished, unless that nutriment was restored. By others, the deterioration was not so much charged to the lack of nourishment, as to the elimination of excrementitious matter, the throwing off of a fœcal slime, which then became a slow or rapid poison to vegetable life.

Of these two opinions, we give in our adhesion to the latter, because it best agrees with our own observations, and is supported by the greatest amount of testimony. Without insisting upon the infallibility of our own views, let us see what may be said in support of the excrementitious theory, or that which refers the unhealthiness of plants, in most cases, to their own rejections.

When first promulgated, the opinion that plants discharged this deleterious matter at all, became the subject of a very warm and animated discussion. It provoked a considerable degree of astonishment and disbelief in the minds of cultivators; and not a few eminently practical men, under a conviction of its absurdity and fallacy, attempted to refute it, and to expose its numerous inconsistencies. But time has materially softened the asperities of this once spirited controversy, and, as the prejudices of different individuals have either been subdued or removed, it appears almost needless to bring forward any further arguments in its support than have already appeared, more especially as the most con-

vincing proofs of its correctness are daily before us, both in the field and garden. We consider it a fact perfectly incontrovertible, that plants and vegetables do emit from their roots an excrementitious slime of a quality inimical to their health and existence. Take a naturally good soil, and grow in it successive crops of any *one* kind of plant. In spite of the application of manure in liberal quantity, that soil will become deteriorated, and unfit for the growth of that *particular* plant. How is this fact to be explained? Why will not the plants do as well as they did at first? The soil is prepared, it is well *manured*, but the result is a failure. Now to our mind, the deterioration results, not so much from the abstraction of nutrition, as from the emission of deleterious substances. But we have palpable evidence of this emission. Take a bulb in a growing state, and place it in a vessel of water, but do not *change* the water. What is the consequence? In a very few days, the roots will become enveloped with a viscid, slimy substance, the water is thick and ropy, and soon begins to smell unpleasantly. Whence comes this exudation *but from the roots?* and unless it is removed by a fresh supply of water, the health of the bulb will be materially injured, and its death certain. Here then is our theory, and we believe it to be generally admitted and established, therefore a few general remarks may be offered relating to the *particular* influence of vegetable forces on certain plants, and thence drawing some practical inferences affecting the cultivation of those plants which are most easily and materially injured thereby.

That the soil is deteriorated much sooner by some plants than by others, must be acknowledged by all who have made this subject a matter of investigation, and the reason *why* they do thus speedily contaminate the earth is—that their excretions are either more abundant, or more virulent in character. What the cause of this difference is, has not as far as we know, been elucidated by any writer, and it yet demands a satisfactory explanation. It is as likely to be the result of repletion as of anything else,—or to state the case differently—it seems that those plants which are supplied with, and are capable of imbibing a larger quantity of liquid nutriment, must necessarily transfuse a greater portion of that sustenance in the form of excrementitious fluids; and, in corroboration of this opinion, the fact may be adduced, that all those plants possessing very strong and succulent roots, the soonest cause the greatest amount of damage to the soil. If this is a correct solution of the difficulty, it follows that when a plant is by any means over supplied with moisture, it becomes so completely saturated, that an unusual discharge of refuse matter takes place, which, accumulating about the roots, generates unhealthiness; it in fact makes the soil what gardeners term “*sour*.” Very frequently, plants grown in pots are observed to be in a sickly condition, and the reason assigned is, “stagnant water.” But the true cause is, we think, to be found in the accumulation of excrementitious discharges, *increased* by too much watering, and *retained* by bad or defective drainage. It frequently happens when plants get into this sad condition, that they are taken from the pot, *some* of the ball of earth removed, and then repotted in fresh soil. But no benefit is derived from the change; they still remain sickly. The only effectual remedy is, to clear their roots of every particle of soil, wash them in clean water, and then pot them in entire fresh compost. Their health and luxuriance will be speedily restored, and they will again flourish with decided energy and vigor. Again, who has not seen orange trees lose every leaf, because their roots have been seriously injured by superfluous moisture. Take them from the tubs, carefully clean and *wash* the roots in weak soap-suds, and then replace them in their tubs with a fresh soil. Now put them in a warm moist heat, and soon they will commence growing, to be again clothed with healthy and bright foliage. Nor is this process alone confined to orange trees, for many if not most other plants may

be treated in a similar manner, and with alike good results. Those who grow the pansy most successfully, always practice washing of the roots, though they may have no knowledge of the principles which should govern them in resorting to the process. Many gardeners do things because they have seen others do them, but they often cannot tell us why or wherefore.

Here, then, we have a few facts, and although they may not establish the opinions herein expressed, they at all events clearly demonstrate the existence of certain functions in the roots of plants, by which refuse or fœcal matter is discharged, and also that these rejections are highly injurious to the plant emitting them, if re-absorbed. We are, therefore, very naturally led to inquire, how shall these deleterious influences be neutralised or destroyed? We believe it has been satisfactorily proved, that only to those of their own species, are the rejections of plants injurious. To all others they are perfectly innocuous, and very probably nutrimental. This establishes the propriety and necessity of attending to the alternation and rotation of crops in the field and kitchen garden, and is a discovery of no small importance to every cultivator of the soil. But how is it in the flower garden? so widely different from growing vegetables. The majority of the plants are of perennial duration; therefore attention to this object is of still greater importance, and more difficult of attainment; for no plant should be suffered to remain more than two or three years in the same spot; if it does, degeneration is inevitable. It is especially to bulbs and tubers these remarks will apply, for to them an occasional removal from the ground altogether, is of very decided benefit; nor is this benefit derived solely from suspended vegetation, but likewise is due to a change of soil. Therefore, this latter fact should be taken into consideration and acted upon, if we desire the treatment to be as perfect as it ought to be.

When grown in pots, plants are far more materially affected by their own rejections, because their roots are confined, and cannot extend themselves into uncontaminated soil; yet much may be done in these cases to remove the difficulty, or to counteract its effects. By some writers it has been declared, but not proved, that from the tips or extremities of the rootlets only, is this excrementitious matter voided. This may be true or not; but assuming it to be true, the importance of an annual repotting is too evident to need insisting upon. To all gardeners it is a well known fact, that at the sides of the pot these rootlets are always found in greater or less number. In repotting, the outside surface of the soil is generally removed, and with it is taken away the injurious matter, in the place of which we substitute fresh and sweet earth. So with a great many plants, we find near the surface of the ground their fibrous roots. With these the operation of top-dressing is practiced, and with the very best effects, only taking care to remove the top soil before making the addition of fresh compost.

But these are not the *only* means of neutralising or removing these unwholesome excretions. There are others of quite as much importance to the horticulturist or gardener, to wit—a thorough exposure to the air, and a free permeation of water. The advantages derived from the latter of these processes is too palpable to need further elucidation, and it will readily be perceived, that in efficiently draining pots, we are doing something more than is commonly supposed necessary. When the water is allowed to stagnate about the roots, the plants becomes saturated, and in consequence, their rejections are more abundant. A retention of this noxious feculence is thus inevitable, which is not only pernicious, but very frequently destructive.

It has been abundantly proved, that by freely exposing the soil to the varied influences of the atmosphere, the excretions of plants contained therein are thereby either evapora-

ted or decomposed. The great advantage then of spreading out soils to the air, and the influence of heat and light, with frequent turning previous to their being used for potting, will be instantly perceived. From these sources, they derive the greater portion of their electrical properties, without which vegetation would become extinct. Nor is it saying too much to refer the utility of digging and ridging to the same cause, as well as the pulverization of the earth and the admixture of nutritive substances. With some gardeners, it is a habit to throw away the soil after having been once used for potting plants, but the practice is not to be commended; the rather is it a wasteful and injudicious proceeding. Much better would it be to expose the soil for two or three years to the influences of the atmosphere, and to turn them frequently during that time. Then, by adding a little well rotted manure, the same soil would become again available, and equally as good as it was before. Where the right kind of soil is scarce, and must be purchased, this is a consideration of some moment, and deserving of no little attention. If soils are not renovated and restored by these atmospherical influences, every portion of the cultivated earth would long since have become a dreary waste, and all our most valuable vegetable productions would now be unknown.

It was once the common practice to purify the soil by burning, and it has been recommended to destroy all extraneous matters by a strong heat. These processes are doubtless useful, but, except for the better pulverization of strong and stiff earths, they cannot be recommended for general adoption. The atmospherical exposure and frequent turning are greatly to be preferred for their efficiency, and are entirely adequate to the complete regeneration of the soil.

Enough has now been said to show the great importance of giving attention to this subject in a practical point of view, and we trust that what has been advanced will have the effect of inducing cultivators to investigate the matter with a great deal more minuteness than has yet been bestowed upon it.

W. W. VALK, M. D.

Flushing, Sept. 11, 1862.

BIRDS, INSECTS, ETC. — A GAIN.

BY J. C. H., SYRACUSE.

MR. TUCKER—In several notices which I have seen of my article on "Birds, Insects, and other matters," published in the July number of the *Horticulturist*, I observe that the writers have, as with one accord, made such haste to pick me up, that they could not possibly wait until I was fairly down. Aiming always to express my opinions in terms that will not admit of misunderstanding, I was a little piqued at my failure to do so in this instance. On recurring to the article, however, I can find no cause for self-reproach on this score; and I must set down the coincidence of error on the part of my critics, as a kind of unaccountable epidemic.

In speaking of the utility of birds, what I said was, "It is a common belief that they are great benefactors of man in the destruction of pestiferous insects." To this belief I avowed my infidelity, basing it upon the fact that, after close observation for many years, I had never seen any of the birds with which we are most familiar, prey upon any of several species of insects which I enumerated as particularly pernicious or "pestiferous," comprising a greater part of those whose destructiveness is most frequent and annoying about our gardens and orchards. What I seem perversely to be understood to say is, that birds do

not destroy insects at all; and then this proposition is combatted by each after his own manner. The *Maine Farmer* kindly volunteered an essay upon ornithology, to prove for my enlightenment that 'insects' *do* form a considerable article of diet for the birds, and gave me particular instructions how to proceed to ascertain the fact, closing with a recommendation that I turn my attention for a while to a course of study in that direction. Though the study would unquestionably prove both agreeable and instructive, yet I accept as a 'finality,' the knowledge which the science has been compelled to yield to that writer's exemplary diligence and perseverance, and which he has been so generous as to impart, and submissively admit the fact he so confidently claims. I am the more readily persuaded, perhaps, to make this concession, as I many years since came to the same conclusion, from observation as a mere outsider. I believe I provided against such exceptional cases as he mentions, of the caterpillar being occasionally eaten by the oriole, and the cut worm by the robin, in the admission that a thousand such instances might possibly be proved, yet with little avail, notwithstanding. Such instances in case of the robin, are evidently mistakes, growing out of the eagerness of his pursuit of angle worms, for which he would not like to be held responsible, were they criminal, and he would honorably waive the credit of them, as they are not. About the time the article in question was written, our orchards here abounded with caterpillars beyond all precedent. There was not an apple tree which was not overrun by them. Now it so happened that on one was the nest of an oriole, and on another that of a robin. As I had never seen a bird of any description assail this pest, these circumstances gave me an opportunity, which I felt interested enough to improve, to watch their demonstrations upon it. Though this observation extended through a period of two or three weeks, including the time of rearing their young, yet I never, in a single instance, saw a caterpillar molested by either of them. The robin manifested peculiar forbearance, for while the worms lay in *plasters* on the limbs leading from her nest, and were often seen even crawling over the nest itself, she sat upon it in perfect composure, and apparently unconscious of their presence. Such observations frequently made, confirmed my disbelief as to their being *great* benefactors in the destruction, at least, of *this* 'pestiferous insect.'

"A Lady Subscriber at the West," also, with the same obliquity of understanding which others who have favored me with their strictures have manifested, is roused to inexpressible anger against me, and rates me soundly for something I did *not* say. Why, sir, in her delusion, she even threatens to take violent liberties with my hair! *Prenez garde, Madame!* that's a hyper-hazardous experiment, and might provoke a retort involving a trial of the christian virtue, *to turn the other cheek also*. I surely was not contending that the boys did not outrage the sensibilities of sympathetic ladies, now and then, by destroying their pet birds, nor extenuating their transgression if they did, but was claiming that their destructiveness in this way was altogether too insignificant *to cause any material decrease of insects*. My own sympathies were distinctively manifested in denouncing woe against them, should I catch them trespassing upon the birds within my territory. I see no cause of quarrel, therefore, between the "Lady Subscriber at the West," and myself.

The very accomplished and agreeable monthly contributor to the pages of the Horticulturist, Jeffreys, betrays the same inevitable proclivity to misconception. He assures me, in the September number, with the most charming earnestness, that birds "*do* catch worms—caterpillars even—and bugs, and spiders." My dear sir, my language was—not that they do not catch a thousand harmless insects of one kind and another, nor that they do not even occasionally, possibly, pick up one of the most "pestiferous"—but that they

are not "great benefactors" in that way. And here I not only reiterate my former declaration of infidelity, but I add to its enormity by avowing my unalterable conviction that the birds are practically guardians, protectors, preservers of the whole generation of insect plagues. You, sir, have given, quite unconsciously, one of my chiefest reasons for this belief, in enumerating among the insects which they destroy, that one, entirely inoffensive to man, yet resolute, untiring, and insatiable in his destructive pursuit of other insects, *the spider*. In view of the almost unanimous avidity with which this universal benefactor is preyed upon by birds, and most especially by that incarnation of impudence and voracity, the cedar bird, who, after fulfilling his contract to strip clean our cherry trees, falls furiously upon the spiders, as though he was under bonds to clear creation of their presence before sun-down; in view of this avidity, if I could be provoked to raise my gun against them at all, it would be, not for their depredations upon my cherries, but that they devour my spiders. Look at their number and variety—pervading all nature, and continually on the alert! Not an incipient curculio, passing from the fruit he has destroyed, who has not to run the gauntlet of a dozen watchful dragons before he can find refuge in the earth. The winged insects, quiet and concealed by day, and thus secure from the attack of birds, are caught at night by thousands, in toils which everywhere beset them while flitting from place to place, disseminating new colonies of their race. Gnats, flies, bugs, worms, millers, grasshoppers, snakes! all fall victims to the ingenious entanglements, the wily stratagems, the secret ambuscades, or the open assaults of this their universal and untiring enemy. What part they performed in preserving for our use the crops of the earth, and what proportion of them in comparison with other insects, are destroyed by the undistinguishing slaughter of the feathered race, it well behooves the inconsiderate adulators of the latter to inquire, before yielding to them the unqualified merit, so unjust, so indiscriminate, and yet so fashionable, and so cheaply rendered, of being, if not the only, at least the unequalled benefactors of mankind. J. C. H.

Egracus. Sept., 1832.

ON THE TOMATO FOR CITY GARDEN PLOTS.

BY AN AMATEUR, NEW-YORK.

THE old adage that, "where there is a will, there is a way," experience has repeatedly convinced me admits of exemplification, in few pursuits to a greater extent, than in that of gardening. Being passionately fond of everything like a fruit or a flower, the contrivances that I resorted to frequently in early life to indulge my inclinations in these particulars, before I had the conveniences for their cultivation which subsequently were at my disposal, have satisfied me, that the true enjoyment of a taste for horticulture, may be had with a little reflection and ingenuity, at a far less cost than the world in general suppose to be indispensable for its gratification.

My object in this paper in alluding to this subject, is to induce a recurrence to it by others; in order that many of them who may not happen to care about tomatoes, may by reading my observations, be led to experiment upon the application of simple means within their reach, to the growth of other things, whether fruit or flowers, which, from want of reflection on the subject, they may at present suppose those means to be wholly inadequate to effect, when, in reality, it is only the idea, which they have need of to enable them to apply them profitably.

My house is in the midst of the city of New-York, near Union Park; and surrounded therefore by other houses. My yard at the back of it, is possibly some thirty feet by twenty, with narrow borders round it, and grass in the centre. The white boards which form the fence round it, and the glare of the summer sun upon them, are not agreeable to my eye; and in the spring of the year I was debating with myself how I could cover them most expeditiously. How, of all things, tomatoes came into my head I know not, but the notion struck me that tomatoes would do very well against the white boards and would at least afford something green to look upon, which would at all events be an improvement upon the then existing state of things. This was about the middle of May, when tomato plants should be ready for planting out; however, I got some seed and sowed it in a pot, which I put in a green-house, and my plants in a few days made their appearance. However, in the last week of May, I accidentally met with some tomato plants, and being impatient I bought a few, for a shilling a dozen, and planted them out against the fence at the distance of about three feet apart. I should mention that the earth in the borders was of the commonest description, little better than sand and rubbish; and I therefore put about half a hat full of half decayed stable manure at the roots of each plant as I put it in. The plants made little progress for a fortnight, when they commenced growing rapidly. They were about a foot high, and not very strong plants, and I placed them about six inches deep in the ground.

As soon as they had made a growth a foot long, I drove small nails in the fence at distances two feet apart, and taking a long piece of string, and commencing at one end of the yard, I passed it over the plants about three inches below their tops, winding the string round each nail as I came to it; and by this means the plants were in five minutes secured against the boards. In another week or ten days, so rapid was their growth, it became necessary to perform this operation of string tying again, at a greater height; and by-and-bye the same thing was repeated more than once, until the tomatoes reached the top of the fence, to which they then formed, as they at this moment continue to do, a beautiful verdant frieze, as though they were planted on the top of it; whilst the whole way up the fence is covered by the foliage, with which the stems of the plants are well furnished from the ground; and till the frost arrives my eyes are saved from the white-washy appearance which during the summer months is to me particularly disagreeable. So far as regards ornament. But this is not all. Tomatoes are very good things, at least I think so; and judging by the quantities which I see in the markets here, my taste in that particular appears to be participated in, by a very numerous body of my fellow citizens. Now from my yard fences, for many weeks past, my table has been liberally supplied with tomatoes, and the plants are still covered with them, as fine in size and in flavor as I ever tasted, notwithstanding they have been grown thus carelessly in a city house yard. The fence is from seven to eight feet high, and as of course the different sides of the yard present different aspects, the fruit has taken a greater or less time to ripen, according to the quantity of sun; and as this has applied equally to the earliest produced on the plants, as well as to the succeeding crops, there has been a continued succession of tomatoes ripening throughout the summer.

Let any one ask himself, is not this worth the trouble? What is the trouble, the planting two or three dozen plants which does not take one hour, and the tying them up against the fence three or four times during the season, which does not take one hour altogether. And what is the expense? Six pennyworth of seed if you raise the plant yourself; or two or three shillings worth if you do not want that trouble. Many families pay more than that every week for tomatoes; when on the above plan they may supply themselves

throughout the season. If half the people in New-York act upon these suggestions they will grow more tomatoes than are now brought into their markets all the year.

I should mention that although I planted out the purchased plants, I put out by way of experiment, half a dozen of those I sowed in May, when they were six inches high or so, and although they were some weeks later than the others, I am now gathering equally good fruit from them.

There is no reason whatever why the yards, (for they cannot with much propriety be dignified with the name of garden plots,) in many of our cities should not be made available either for ornament or usefulness. Amongst flowers, the numerous climbing plants would any of them take off the naked appearance they now almost uniformly present, and amongst vegetables any of the running beans would be better than doing nothing with them. But taking into account the red spider and some other equally "kind friends," who *take an interest* in gardening pursuits, I doubt whether my tomato idea will not be be found as good a one as many others; that they will succeed I can from experience testify.

AN AMATEUR.

HINTS FOR YOUNG GARDENERS.

BY AMERICUS.

WE quite agree with our good friend JEFFREYS in his remarks contained in the September number, that want of taste amongst us, and too much anxiety about dollars and cents, is fearfully impeding our enjoyment of the beauties of nature, as well as depriving us of those feelings of personal satisfaction in the results of our own well directed pursuits, which contribute so considerable a portion of the happiness of the leisure hours of those who have once learned to appreciate them. But although much is undoubtedly owing to the above causes, this state of things is in a still greater degree owing to the want of knowledge in gardening matters which exists amongst us. Many a man who for the first time gets hold of a piece of ground, would, we think, become a gardener, if he knew how to make a beginning; but he don't want to incur the expense of a gardener continually, and if he buys a book about gardening, he finds so much that he thinks difficult to effect, or too troublesome to undertake, that he lays down the book in disgust, and his intended garden remains a wilderness.

Let us endeavor to give a few hints to beginners, of quite a homely kind, and try if we can get them to do something that will, with little expenditure of either time or money, put them in the way of having next year something to look at, and something to eat also, from those few square yards of ground that surround the pretty cottage residence in which may reside as manly a heart, aye, and may be, for its companion, as pretty a face as ever graced a palace.

Winter is approaching; before it comes, and without loss of time, knock together a few boards, and make a garden frame; get a couple of glass lights to cover it, surround the frame with earth or litter up to its edge, at least eighteen inches or two feet, all round, and provide a cover by making a straw mat, or a wooden one of old boards, to put over the glass at night, when the hard frosts set in. In the frame sow at once some flower seeds of any hardy sorts, such as Nemophilla, Candy Tuft, Larkspur, Phlox Drummondii, Sweet Alyssum, Sweet William, Antirrhinum, Pink, Polyanthus, Stock, Columbine,

and Pansy; and to these if you like, you may add, a small collection of bulbous roots, as Crocuses, Hyacinths, Narcissus, &c.

It will be more convenient for the planting out in the spring, if these are sown separately in small flower pots; but if you have not pots, they may be sown in separate small patches, leaving just room enough between each to take them up when they are to be transplanted in the spring, with a garden trowel, or a flat piece of thin board cut into something of that shape. During the next two months you may take off the lights all day, except in very wet weather. When the frost sets in keep them covered with the lights, and at night, and in snowy weather, cover them over with the mat or board cover, but during sunshine give all the light you can in the day, by removing the mats. In this way you will have, when the winter has broken up, and the ground has become fit for the spade, a nice lot of things to turn out into your flower beds, and they will soon become gay and blooming. Manage not to fill your frames quite full, but leave a part of one light in which, in the beginning of February, you must put some light fine garden mold, and sow in it small patches of the following seeds for your kitchen garden; early cabbage, lettuce, and cauliflower; sow these very thin, and when well up, pull up a few to make room for those left, to grow stronger.

We will now leave the frame alone, and see what else has to be attended to—because, with the above instructions, you will be able to take care of that through the winter—remembering if you find the earth in the pots to get dry, you must give a little water occasionally, through the fine rose of a watering pot; but with care, for very little water will be required.

As soon as the leaves have fallen in autumn, let them be all collected and swept together to commence what you will find the most valuable assistant to your gardening operation or muck-heap. To these add all the refuse vegetable matter from your kitchen, such as potato and turnep peelings, and any waste straw and litter that comes to hand. Throw a sprinkling of earth upon this heap, which will hasten decay, and after a few weeks turn it all over, with the same object; for, after every time that you turn a refuse heap, you induce fermentation. Before frost sets in, dig over deeply your garden ground, or that which you intend to make such, and lay it up in ridges for the winter. This materially benefits it in very many ways, some of which are well known and understood, such as the more complete destruction of vermin by greater exposure to frost, and the rendering it more friable and more readily worked in spring; and others, which are equally well ascertained, but not so generally known, as for instance, the increased facility thereby afforded for the absorption of ammonia from the atmosphere, which the ready permeability of the ridges of loose earth, by the atmospheric air induces, in much greater quantity than can take place when the earth is only just turned over a few inches, and left in a comparatively even and somewhat firm state.

In this way your ground may lay all the winter. If you happen to have any of the more tender kinds of roses, as the varieties of the China or Bourbon, you will do well to put them in the frame for the winter, where a number of them laid together, with their roots covered over with mold, will keep well, and in a small compass, to be planted out when you decorate your flower beds with the contents of your winter frame in the spring. And any other common green-house plants or shrubs you may keep in the frame also.

Your garden, and your frame, will now be in a fair way for next years horticultural campaign, and your occasional visits to the latter, and the daily attention to the covering and un-covering, far from being found a labor, will often, during the dreary season of win-

ter, afford you pleasure. Habits are soon acquired, and then we associate with them imperceptibly, the idea of amusement; and it is astonishing to find how soon we take an interest in any subject, when once we have resolved upon prosecuting it. The garden frame thus commenced, has to our knowledge in numerous instances, led its owner on, step by step, until the green-house and hot-house have been found the only means of gratifying a taste which slumbered only to be awakened to the enjoyment of those beauties which the Courts of Flora can alone unfold to her delighted votaries.

With the above, however, for the present as a beginning, you may if you please be content; but before telling you how to carry on your operations at the end of the winter, I will describe another auxiliary, which you may in the beginning or middle of March, call into requisition to add to your enjoyments, and that is a hot-bed. And this you may make as follows:

Get three or four loads of fresh stable manure from the stable, and shake it with a fork, and lay it up in a heap; let it remain three or four days, and then turn it all over and shake it up again, and let it remain for the same time in a heap; repeat this again after a like interval, when for so small a bed it will be ready for use. Now proceed to make your hot-bed. You will require a frame with one or two lights; mark the size of your frame on the ground, by driving a stick at the four corners. Dig out the ground for eighteen inches deep. Throw in any old brush-wood or dry litter at the bottom, then fill it with the prepared manure, treading it evenly down as you go on, and taking particular care to make it firm and steady at each corner, otherwise when it subsides, which it is sure to do, it will get crooked. If your manure is moist, well and good; but if it appears dry, take some water and throw on as you make it up, so as to wet it moderately. When you have filled up the place dug out, widen the bed a foot or so all round, and continue it until all your manure is used up, beating or treading it down evenly. Then place the frame on the top, and the light upon it, and let it stand. In a few days, you will find it has become very hot; the frame will fill with rank steam like smoke; the light should be raised a few inches, to allow this to escape. As soon as you find this rank steam begin to subside, put six or eight inches of good garden mold into the frame, which in twenty-four hours will be warmed through, and if you find no return of the rank steam in another twenty-four hours, it is fit for use. Take care, if there is windy weather, to protect the side of your bed next to the quarter from which it blows, by rough boards, or a screen of some kind. Unless you do this, the wind will blow through the bed and cool it very quickly. In this bed you may sow in March, tomatoes, egg-plants, okra, pepper, early cabbage and lettuce, all of which will be ready for planting out in the open garden by the time that the ground is ready for them.

Whether you make a hot-bed or not, at all events, as soon as the winter has taken leave of your neighborhood, set about to get your garden in order. With the rake and hoe, level down your ground, lay out your vegetable garden into beds, and sow seeds of such as you wish to grow, and plant out from your frames a part of your stock of cabbage, lettuce, &c. Do not, however, put all out at once, in case of a return of a sharp night's frost; but when you are satisfied there is no return of that likely to occur, the sooner you get out your general stock the better. The flower beds should also be raked over; your frame seedlings turned out of their pots, or taken up carefully and planted into them; and a further stock of annuals sown in the open ground to succeed the bloom of those turned out of the frames. Any green-house plants wintered in the frames may also be turned out into the ground, or re-potted into larger sized pots, if it is desired to keep them for decorating the parlor or verandah; and soon will you be rewarded for your

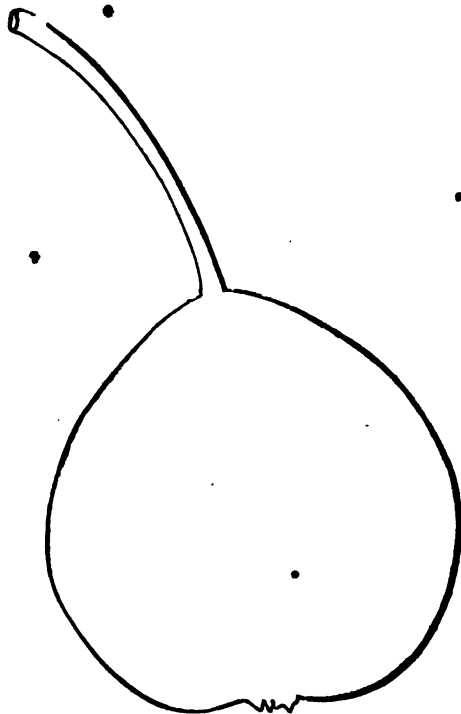
winter's care, by that loveliness of floral display, which, as in the instance of the "lilies of the field," has been declared by unerring Wisdom, to exceed the array of "Soloman in all his glory."

We had intended to add a few words upon the summer treatment of the flower garden, but our paper is long enough, and we must postpone it for the present. Enough has been said for all, at this time of year, to make a beginning.

AMERICUS.

DES NONES PEAR.

LUTHER TUCKER, Esq.—We send you by express to day, specimens of a pear, new to us, which has ripened on our grounds this season for the first time. We received the trees from M. ANDRÉ LEROY, of Angers, under the name of *Des Nones*. We have never seen it advertised, either in his or any other catalogue, nor met with a description of it elsewhere. We think you will join with us in pronouncing it a pear of the very highest excellence—combining in an eminent degree the high flavor of the Sackel, with the delicious melting qualities of the Belle Lucrative. The tree is a luxuriant grower, forming a handsome pyramid, and is an abundant bearer. The fruit is uniformly as fair as the specimens now sent. It commenced ripening about the 10th of September; these specimens, now lapsing into luscious perfection, being among the last. Among a hundred varieties, many of them new, which have ripened on our grounds the present season, we have found no one, if we may not say that equals it, we certainly may, that surpasses it. The accompanying outline and description pro forma, are at your service, if you think its merits entitle it to be placed before your readers.



Des Nones Pear.

Fruit—medium size, regularly turbinate. Skin—smooth, fine clear light yellow, covered with numerous small brown dots. Stalk—from one and a half to two inches long, slender, inserted in a very slight depression. Calyx—small, closed, and placed in a small shallow basin. Flesh—whitish, very juicy, sweet, melting, and delicious, with an exquisitely fine rich flavor and perfume. Ripening from the 10th to the last of September.

We are very respectfully, &c.,

THORP, SMITH, HANCHETT & Co.

THE YELLOWS IN THE PEACH.

The investigation of the nature of this disease appears to be quite overlooked or neglected. It seems indeed a remarkable circumstance that a malady which annually destroys many thousand trees, and which possesses very distinct and marked characteristics—as many believe—should have its very existence doubted by some of our most eminent pomologists, who regard the death of the trees as merely the result of neglected cultivation and want of fertility in the soil.

Our attention has been just called to this subject by a letter from SALMON LYMAN, of Manchester, Conn., who writes,—“The Yellows in peach trees is becoming very common among the trees in Connecticut, and unless something can be done to arrest the disease, people will become discouraged in trying to raise them. It was introduced into this vicinity with trees from New-Jersey. I am informed that the yellows does not exist within many miles of your place. I observe that you cultivate Crawford’s Early and Late Melocoton—these varieties, with some others, I have supposed did not exist in a healthy state, and that they were originally propagated in New-Jersey from diseased stock, and that, remove them where you would, the native taint would develop itself in the yellows. I have procured Crawford’s Early from New-Jersey, Long-Island, Newburgh, Providence, and Boston, and not one of all lived more than from three to eight years before they were worthless from disease. I have never seen a Crawford peach tree that appeared to be more than eight or nine years old, which did not show decided marks of disease. Have you trees of these New-Jersey sorts which are more than eight or ten years old? If so, what can be the influence that prevents the developement of the yellows? It cannot be your lime and ashes, for they are treated in New-Jersey with an abundance of lime and marl.

“I am surprised that so little is said about the yellows in the Horticultural papers, and pomological conventions. Would not the history of its rise and introduction into the different sections of our country, be interesting, and lead to the proper means for guarding against its introduction in new sections of the country? I believe there was but little of it in this part of Connecticut, until the *Morus Multicaulis* speculation, which was taken to New-Jersey in exchange for peach trees, which could be sold here at twice their cost. They were brought here in large quantities, peddled out or sold at auction, and wherever they were planted the yellows now prevails.”

In reply to the preceding inquiry, we may state, that we have never observed any symptom of the yellows on a single tree of the Crawford in Western New-York; but as those observed were mostly not over eight or nine years old, we applied for further information to H. E. HOOKER, of Rochester, a very careful and intelligent observer of fruit trees and their maladies, and he has furnished the following statement:—

“The oldest trees of Crawford’s Early Melocoton, with which I am acquainted, are standing in Mr. Schenck’s orchard, a very extensive market cultivator of the peach, near Rochester, N. Y. They have been in full bearing for near seven years, under my own observation, and were large trees when I first knew them; they must be at least twelve or fifteen years from the bud; and neither now or ever have shown any symptoms of the *Yellows*, as I understand that disease. I have never been able to discover a tree in all Mr. Schenck’s orchards, nor among the other smaller orchards around us, which were set with trees from him, and which he procured in New-Jersey, where the peach tree in the orchard is not expected to survive more than four or five crops of fruit. Crawford’s

Late, has not been in bearing for so long a time, but I have seen no indications of disease in this any more than in the former, as a *variety*; in fact, we have considered it a peculiarly *hardy* sort.

"The *Yellows*, as I understand it, is a disease whose symptoms are, a *very* slender, feeble growth of young wood, with small yellow sickly looking foliage, a feeble starved appearance of the tree, and generally a crop of slendry yellow shoots appearing along the large branches; which symptoms increase for two or more years before death ensues. I have seen this, in some orchards brought from New-Jersey, and observed the premature ripening of the fruit, and spread of the disease until the orchard nearly or quite disappeared, and as I thought took with them some heretofore sound trees, which grew in their vicinity. I confidently looked for the spread of the evil, and was prepared to blame the man who had brought us trees from the infected district. But I am not satisfied that it does not spread *here*, nor that there is no *one* diseased tree (having the yellows,) within my knowledge in Rochester.

"These facts, have quite staggered my faith in the "diseased stock" theory, and lead me rather to believe, that the poor shallow soil, from which the peach tree rapidly exhausts the elements of growth and fruitfulness, under a system of heavy cropping without much manure, rather than the presence of any poison or virus in the system, has been the cause of so much complaint of premature death of the peach tree in the eastern and southern States. I am not clear that the apple trees of New-Jersey, in the peach districts are not similarly affected, and should judge that a removal of them to Western New-York, would increase their size and prolong their days, in the same proportion that the health and duration of peach trees grown in New-Jersey nurseries is prolonged, by removing them to our deeper and richer soil.

"It would be an interesting experiment, if some one in the east would try peach trees in Western New-York, along side of some from New-Jersey, and let the public know the results. Here trees from both sections *usually* do equally well, so far as my observation extends; a *few* exceptions, as I have said, have come under my notice."

Our chief object in furnishing these statements, is to invite investigation. There is no question, but that much of the soil in Western New-York, is one of the best that the peach can grow in—where we have seen those that measured a foot in diameter, and which were probably more than forty years old, bearing fruit. Nevertheless, we have witnessed there the prevalence of the yellows in a virulent form, and decidedly contagious in its character, among the most vigorous trees. All the usual symptoms of premature ripening, and discolored and insipid flesh, followed by sickly leaves, and wiry shoots from the large branches, first made their appearance on trees introduced from New-Jersey; the next year after the first appearance of these symptoms, *all the trees standing nearest to them* were observed to be similarly affected, *but at first on the branches nearest the diseased tree*. By a prompt removal of those affected, the malady was checked, and it is now many years since the last vestige has departed from this region. A further proof of its contagious character, is the fact that a knife used in cutting a diseased tree, communicated the poison to another; and a bud from one that had scarcely showed an appearance of decline, proved fatal to the tree in which it was inserted. That this malady may prove more contagious at certain times or under certain circumstances, is by no means improbable. That the soil has a large influence in its prevention, was confirmed by the fact, that in the neighborhood of Burlington, as Thomas Hancock informed us, there are flourishing trees some thirty years old, on a favorable locality, while in other places they never survive but a comparatively short period. But the soil cannot be all, for an intelligent cultivator re-

siding on the Hudson, at a place where the peach trees are commonly quite short lived, informs us that trees procured where this disease is unknown, grow and flourish for a much longer period than those from an infected region.

CULTURE OF GRAPES IN VINERIES.

BY WM. CHORLTON, STATEN ISLAND.

Mr. TUCKER—In the Horticulturist of February last, I gave an account of the cold graperies at this place, in which was stated that there was ripened 262 bunches on 74 vines, the season after planting. In the March number, Mr. CLEVELAND, of Burlington, in a very sensibly written article, thought that the vines would be injured by such early cropping, and requested information respecting their progress this season, which I now with pleasure respond to. It was then stated that I expected to ripen 600 to 700 bunches this present season. The number ripened is 618. The vines showed altogether, over 2,400, many of the shoots from a single eye, throwing out four bunches, which were uniformly reduced to one, and at thinning time these further reduced so as to leave from seven to twelve on a vine, according to supposed weight of bunch and strength of plant, so that the energy might be equipoised. The result has answered my expectations. The growth has been quite as vigorous as can be wished for; the sidespurs, from bottom to top, are uniformly strong; the wood is now quite brown and hard, with prominent well rounded buds for next year. If proof of quality is required, it is answered by the fact of my having obtained the first premium at the last exhibition of the New-York Horticultural Society, for the best 8 varieties, the weight respectively of which was as follows: Syrian, 2 lb. 14 oz.; Xeres, 2 lb. 3 oz.; Victoria, 2 lb. 1 oz.; Black Hamburg, 3 lb. 1½ oz.; Deacon's Superb, 1 lb. 4 oz.; Black Prince, 1 lb. 13 oz.; Reine de Nice, 2 lb. 9 oz.; Austrian Muscat, 1 lb. 1 oz. There are now in the house many equally fine and well colored.

For the satisfaction of your correspondent, H. B., I may state, that the first grapes were cut well ripened on the 11th August, viz: Malvasia, a beautiful little grape which ought to be in every collection, and Muscat Blanc Hatif, one of the best flavored grapes in cultivation, but liable to crack when swelling to ripen. No heating apparatus of any kind, has been used, and taking into consideration the late spring and cold summer, this will be equivalent to the 2nd August of last year,

I am obliged to Mr. MESSER, in the September number, for his friendly hints, respecting what he thinks should have been substituted, in composing of the borders, different to what was used, but would say that he fails to convince me that he is right. He says, "it is in vain to expect a similar growth the following season, or this present season, with ordinary rates of manuring," adding, "if one-half the quantity of bone dust and stable manure had been used, and a suitable lot of whole bones or cattle's feet, or slaughter house offal, had been added, the fertility of the border would have been more permanent at less cost." To the first assertion, I answer, that last season the canes were quite as strong as the first year's growth, and this season there is no more difference than is more than made up by the strong side shoots; the top growth would have been equally strong, (and in many cases is quite so,) but for the very reason that the heads were kept down longer on purpose to force the development laterally, which is a point not often sufficiently attended to with young vines; some of the wood of the present season is three-fourths

of an inch in diameter, which is surely strong enough for vines in full bearing. Of this he may have ocular demonstration, now the canes are swollen up. The bones used were mostly about one-half inch in diameter, and of the size they can be evenly distributed through every part; and as bones give out very slowly, there is no fear of permanent benefit as far as they are concerned. As to slaughter house offal, it has a tendency, under some circumstances, to produce an enormous growth for a short time, but as to its permanent qualities, many cases might be brought forward to show that precisely opposite effects are produced by it. I am convinced from experience, that as fine and well flavored grapes can be grown without, as with this stinking offal, which ROBERTS, more poetically and ridiculously, calls "the pabulum which is to supply the nectar of Bacchus." Even allowing it to be more permanent, a border in which it has been used in any thing like a fresh state, (and this is the way in which it is generally applied,) will in a short time become a sodden mass, and more fit to puddle the sides of a duck pond, to hold in the water, than a base for the succulent and tender rootlets of the grape vine to luxuriate in. If used at all, it should be thoroughly decomposed, and blended with other compost before being applied. As fine grapes were grown before these substances came into fashion, and as fine will continue to be grown when they are numbered with the things that were.

As to the second assertion, viz: less cost, I do not see how slaughter house offal is to be collected and conveyed a distance of seven or eight miles at a less cost than stable manure, which is always readily and cheaply obtained near large cities, and the difference in the bones is so trifling as not to be worth calculating, where a thing is intended to be done right.

Your correspondent also seems to think, that I shall not be able to keep the wood "at home," by the method on which the vines are pruned. I can assure him that it is just as easy to do so as by cutting back so close, with the advantage of retaining more plump and well swelled eyes, thereby ensuring larger and better shouldered bunches. As he does not seem to have a right idea of it, I will explain.

In pruning in the fall, after the first year's growth, each alternate eye is disbudded on each side of the cane, leaving those wanted for breaking next season, about 15 inches apart. The next season, when pruning for spurs, the side shoots are cut back to three eyes, or even four, according as the lower buds may be plump and well rounded. In breaking, each bud puts forth a shoot; the most promising one nearest to the top, and the one at the base, are allowed to remain, and the other is rubbed out. The top one is allowed to bear, and the fruit on the bottom is pinched out. The fruit bearing spur is stopped three or four joints above the fruit, and the other one next to the base is also stopped, when it has grown seven or eight leaves. They are now trained per diagram. *a* is the bearing shoot, and *b* the one not to be fruited till next year; at next pruning, (or what is still better, two or three weeks previous,) *a* is cut clean out to the base of *b*, and when the leaves fall *b* is cut back to three eyes, as *a* was last season, and so on from year to year. As your correspondent, Mr. Measer, truly says, "nature will out," their will never be any lack of eyes close to the main cane if the above is rightly performed. Notwithstanding the readiness with which the grape-vine pushes fresh shoots when so closely pruned, there are some of the larger and gross growing kinds, that fruit shyly, or produce nothing but small bunches by such treatment—and this is one reason why some fine sorts get a bad character.



WM. CHORLTON, gardener to J. C. Green, Esq.

New-Brighton, Staten-Island, Oct. 10, 1853

Foreign and Miscellaneous Notices.

ROUGH PLATE GLASS FOR THE ROOFING OF HOT-HOUSES.—For two years past, much excitement has been produced in England, by a proposal to roof plant-houses with a new kind of rough plate glass, for which a patent has been obtained there by Mr. HARTLY. This glass is prepared by a rolling process, which destroys transparency but not translucency; and the benefit said to be derived from it, (and which experiments made under the direction of the Horticultural Society of London, appear to have confirmed,) is the very important one, that without obstructing the light, this becomes dispersed instead of concentrated, in passing through it, and that no shading is required in the hottest sunshine. Altogether, the subject is so well deserving consideration, that we give our readers the results of the experiments alluded to, as detailed in the *Gardener's Chronicle*.

"The garden committee directed the rough rolled plate glass to be tried in the garden of the Horticultural Society at Chiswick. For this purpose a small pit, unventilated except by sliding the sashes, and heated by hot water pipes, was selected. In the last week of August this pit was filled with soft wooded plants, which can only be kept in health in the presence of a large quantity of light, among which were the following, viz: The *Begonias odorata*, *undulata*, *argyrostigma*, and *dichotoma*; *Torrenia asiatica*, *Pentas carnea*, *Adamia sylvatica*, *Calostylis aurantiaca*, and *Achimenes picta*. The four *Begonias*, *Calostylis*, *Adamia*, and *Pentas* had been cut close back, and were leafless; *Torrenia* was a cutting just struck, and of *Achimenes*, the dry tubers were employed. The experiment was thus set in action, without any special care having been taken to make it succeed; on the contrary, everything was against success. It is needless to say, that the months of October, November and December, 1848, were more than usually gloomy, and that neither January or February offered any advantage over those months in ordinary years. In addition to this, it was often necessary to leave the plants in the dark all day long, in consequence of the sashes being covered with frozen mats, which could not be removed. Nevertheless, and notwithstanding these impediments, the experiment was

perfectly successful. On the plants being produced, at a subsequent meeting of the Horticultural Society, by Mr. Gordon, to whom the experiment was confided, they appeared in the most beautiful health, with firm, short wood, broad, thick, clean, bright-green leaves, and in the case of the *Gesnera* and *Pentas*, flowers perfect in color, size, and form. In short, it may be said without the least exaggeration, that more perfect examples of high cultivation were never seen, and few so perfect. It was clear that there had been no deficiency of any element or condition which is required for the most perfect health. This conclusive proof of the excellence of rough plate glass, possesses the highest agricultural interest. It shows that gardeners are now secured effectually from the scorching effects of the sun during summer; and that all the costly, as well as inconvenient contrivances for shading, may be, in future, dispensed with."

So much for the London Horticultural Society. Mr. James Roberts, one of the most successful cultivators in England, who has the care of the grounds of the Duke of Cleveland, at Raby Castle, speaks of this glass as follows:

"At the present time I have nearly 3000 feet of it in use, and I am so far satisfied of its superiority, not only over sheet glass, but also over all other kinds of glass, for horticultural purposes, that for whatever is to re-glaze or erect new here, I will adopt it without hesitation. I use it for plant culture, melons, cucumbers, propagating, &c.; and perhaps no one regrets more than I do, that I cannot replace the sheet in my vineries with it. It is a mistake to suppose that it obstructs light; on the contrary, it collects and diffuses it better than the clearest sheet or crown glass. Another advantage which it possesses, is that there is no scorching and no shading. As to this kind of glass becoming dirty, that has not happened here. It effects a saving of fuel, and is proof against the severest storms."

PLANT-HOUSES.—Large plants in pots, may with great advantage, be sunk into the border; overcrowding must also be avoided in every other structure where plants are stored for the winter. It is far better at this season to throw away the worst of the stock, than run the risk of injuring the best plants. Favorite sorts will be better replaced by young plants in the spring.

Notices of Societies.

American Institute—Annual Fair.

We attended the Annual Fair of the American Institute, held at New-York during the past month, for the purpose of inspecting the horticultural and floral departments, and we proceed to lay before our readers some remarks upon those portions of it which appeared to us most deserving our notice. Before doing so, we cannot refrain from expressing our gratification at the magnificent display which the Fair presented of our country's science, energy and industry, in almost every department of manufacture and art, and we have also to thank the chairman of the horticultural committee, Peter B. Mead, Esq., for his obliging politeness in acceding to our request for permission to make use of his lists of the adjudication of premiums by the judges, to assist us in the preparation of this report.

There were some fine specimens of APPLES exhibited, and the display of them, as a whole, was the principal feature of the fruit exhibition. The silver cup for the greatest number of choice named varieties, was gained by John W. Bailey, of Plattsburgh, N. Y., who exhibited 65 varieties; and the silver medal, for the second best, by W. J. Carpenter, of Harrison, Westchester county, N. Y., who produced 40 varieties; the third premium was given, for 23 varieties, to Ira Condit, of Essex county, N. J. For the smaller collections of apples, a discretionary premium was awarded for 25 varieties to Isaac J. Underhill, of Seacaneus, N. J., a collection which was highly creditable; and although not nearly so numerous as those above mentioned, we doubt whether an equal number of such fine fruit could have been selected from either of the large collections. Amongst them was a fine apple in appearance, named the Congress apple, which, we were informed, was a seedling variety, which has not been exhibited before the present year; and of which the flavor is represented to be fine. If this is so, and its bearing and keeping qualities are good, it bids fair to become a favorite. There were several small collections of apples exhibited, some of which deserve notice, although we think the judges exercised a sound discretion in not awarding

premiums to them: because, however fine and handsome a single small basket of apples may be, unless it is a new variety, or has some especial recommendation to entitle it to notice, it is not within the intention of these exhibitions to give rewards for a few fruits, however fine, which are readily selected from, may be, a large orchard. On the other hand, it is not, on that account, the less praiseworthy in exhibitors to send any small contribution of the sort, which is sufficiently conspicuous to attract notice; inasmuch as it evinces a commendable interest in these undertakings, and shows a desire to assist in their advancement; whilst the knowledge that, although all small exhibitors cannot obtain premiums, the merit that is due to their productions is not overlooked by the public, will, we trust, encourage such exhibitors to a perseverance which on some future occasion may obtain for them a place by the side of their more fortunate competitors on the present occasion. For this reason we notice with satisfaction the following, which formed conspicuous objects: A fine basket of Belle Banders apples, exhibited by S. E. G. Rawson, of New-York, a label to which stated them to be a part of 85 bushels from a single tree. Many who admired them, will doubtless wish a fellow tree to be growing in their own orchard. Three plates of remarkably handsome apples from George Proceus, of Red Hook, Dutchess county; some fine Newtown Pippins from W. A. Underhill, Croton Point, were very handsome fruit, but barely ripe. A large dish of the Sherwood Seedling Wax apple, attracted much notice, exhibited by L. W. Annan, N. Y. A handsome basket of Gloria Mundi apples, from C. T. R. Applegate, of Hightown, N. J. A basket of very fine fruit from Richard Read, of Clarksburgh, Monmouth county, N. J. All these collections were very pleasing to the eye, and could not fail to satisfy the observer, that the growers of them are amongst those who meritoriously uphold our reputation for this valuable fruit. A pyramid of apples, which occupied the centre of the table, contained some good specimens, and was furnished by Caleb H.

Earl. But we are not amongst the admirers of this mode of exhibiting fruit. There is, we think, a *propriety* in these matters, which contributes much to enhance the beauties of all horticultural exhibitions; and we cannot help thinking a bushel of apples, even laid loosely in a heap, present more symmetry to the eye, than if they are tied round a post. At the same time, we think that if a little more attention was paid by exhibitors, or by the managers of the exhibitions, to the more tasteful arrangement of the dishes of fruit on the tables than we frequently see, a much more effective result would be produced; for by placing the several dishes of each collection in some order as regards the size of the fruit, and its color, there is no doubt the exhibition tables would present a more attractive appearance. One would think that even the disposition of a dessert on the dinner table might suggest enough to induce attention to this.

The PEARS were not so numerous as the apples, but Messrs. Hovey, of Boston, exhibited many fine ones, in the whole numbering 175 varieties, which gained them the silver cup; and Jeremiah Briggs, of Jamaica, Long Island, obtained a silver medal for 80 varieties, the third premium being awarded to John Tonela, of Bergen. Some of the pears in smaller collections were good: we noticed particularly those exhibited by Frederick Glover, of East Brooklyn.

We caution exhibitors in these days of fine fruit growing, that they must, many of them, increase their vigilance, in taking care that their fruit is sent in proper condition. We observed many of the apples in some collections were much bruised. This is carelessness in the generality of cases, and should disqualify such fruit from exhibition, on the same principle that a bruised or broken petal does a florist's flower. We call the attention of judges to this. Strict, but at the same time impartial judging, is the only way to secure onward improvement in horticulture, be the branch what it may. The office of censor at these exhibitions is seldom a desirable one. Well digested and known rules, uniformly adhered to, is the only way for the judges to give, (as we are sure they always desire to do,) satisfaction to all—particularly as their office is one which often presents much

ground for a diversity of opinion, and must frequently be exercised upon nice distinctions.

The three premiums for QUINCES were awarded to W. A. Underhill, R. T. Underhill, and R. L. Colt, of Patterson, N. J., for very respectable specimens.

NATIVE GRAPES were shown by several—and many of them in quality and condition fine—and which must have satisfied many who still remain skeptical on the subject, that they well deserve the increased care and attention that we are now giving to them. The best Isabellas, which obtained the silver medal, were exhibited by R. T. Underhill, the second by W. A. Underhill, and the third by Thomas R. Porter, New-Jersey. Mr. W. A. Underhill also obtained the first premium for Catawba, and R. T. Underhill the second. The silver medal for the best foreign grapes, was awarded to R. L. Colt, but of these, not any really fine foreign varieties were exhibited.

Mr. S. T. Jones, of Staten-Island, was first in the PEACH exhibition, (both for freestones and clingstones,) which was very limited, and nothing remarkable in quality. The second premium for freestones was gained by H. U. Mott.

A small box of very nice CRANBERRIES was sent for exhibition by John J. Webb, of Jackson, Ocean county, N. J., but it did not arrive until after the judges had gone over the fruit.

When these remarks were written for the press, the judges had not awarded the premiums for the floricultural part of the exhibition, and we will therefore defer our notice of that branch until next month; but we cannot omit to notice, in justice to the fair sex, that the visitors to the exhibition are indebted to them for several very beautiful specimens of skill in the shape of Ornamental Vases, and baskets of ARTIFICIAL FLOWERS, constructed both in wax, and in paper. The advance recently made in the beauty of construction of those made of the latter material, by the more skillful artists, is so great as to render them very formidable competitors to those made of the more congenial material, wax, the similarity of which, to the texture of the natural flower, has hitherto given it an advantage which has not heretofore been approached. But some of the Paper Flowers

which were exhibited by Mrs. Van Skillins, 889 Broadway, New-York, evince so much taste, and are so well made, that the superiority of the softness of the material employed, over the stiffness of the wax, becomes strikingly apparent. One basket of flowers by this lady, in a large square glass case, is of really surpassing beauty, and is undoubtedly one of the most elegant and successful things of the kind that ever graced an exhibition. There were also from Mrs. E. Nott, 349 Hudson-street, New-York, some beautiful Vases of Wax Flowers and Fruit. Her Vase of Flowers was very beautiful, and although we believe more difficult to construct, was superior to her fruit, which was not naturally colored, but in other respects was good. A very excellent vase of Wax Flowers was also exhibited by Mrs. Alfred Sellers, of Sands-st., Brooklyn, the Fuchsia, Narcissus, Lilly, and Carnation, in which were some of the best executed specimens that we have seen for some time.

The VEGETABLES, as a whole, were the more important part of the exhibition. Several assortments were in the rooms, which were most excellent specimens of culture, and were deserving of all the honors they received at the hands of the judges. For culinary vegetables, the silver cup was awarded to H. C. Murphy, of Yellow Hook, Long Island, in which collection the White Silver Onions, the Parsnips and the Red Carrots, particularly called for remark; the White Carrots were fine, but not equal to some which were exhibited by J. L. Scofield. The second premium in this class was given to J. A. Perry, New-Utica, Long-Island. For best and greatest variety of vegetable roots for cattle, the silver cup was awarded to Jacob P. Giraud, of Bergen, New-Jersey. This collection gave the best practical evidence that those scientific experiments have been eminently successful, which we understand Mr. Giraud has been making, in order to test the opinions of Liebig and other modern chemists, who have of late advocated the expediency of manuring upon a plan bearing especial reference to the proportion of the particular elementary substances entering into the structure of each vegetable production of the earth, so that the substances taken up by each crop may be restored to the ground. Upwards of twenty sorts of

vegetables were exhibited in this collection, and were uniformly fine and handsome. Amongst this assortment were to be found specimens of the unequalled collection of Indian Corn which this gentleman has accumulated, and which he has enriched by several new and very desirable varieties which he has originated by hybridizing. This collection of corn contained 60 or 61 varieties, of which the aggregate number of ears on the table was upwards of 1,100, presenting what we believe to be the most perfect collection in the country. For this reason we subjoin the names of the varieties with which we have been obligingly furnished by Mr. Giraud, to whom we applied for it under the consideration that these particulars will be acceptable to be our readers.

Varieties of White Corn.—Long Island, Elongated, Canada, Twelve Rowed, Flesh Colored, White Taper, Rhode Island Cap, Giraud's Bergen, Pearl, Virginia, Devereau, Chinese Tree, Oregon, Gourd Seed, Ohio, Small Dent, Rice, Nonpareil.

Yellow Corn.—Golden Sioux, Golden Spike, Large Eight Rowed, Medium do, Small do., Canada, Jersey, Galatz, Dutton, Dowling's Early, Maryland Duttons, Kentucky Dent, Small do., Orange Cone, Nonpareil.

Brown Corn.—Large Twelve Rowed, Bergen Red Cone, Striata, Rice, Nonpareil.

Fancy Corn.—Several varieties mottled.

Table Corn.—Rhode Island Sweet, Stowel's Evergreen, Hematell, Biore, Tuscarora, Early Burlington, Early Canada, Mandan.

The second premium for vegetable roots for cattle was gained by Mr. J. A. Perry, whose collection was also fine and good.

Fine specimens of BEETS were produced by several exhibitors. Mr. J. A. Perry was again the successful competitor, both for the long blood, and the turnep-rooted varieties, and he merited his success; whilst E. T. Jones, of New Brighton, Staten Island, obtained the premium for sugar beet, and Wm. Harsell, of Ravenswood, Long Island, had that for mangel wurtzell.

For the best table Carrots, Charles Williams, of Newark, N. J., was the winner, and J. A. Perry, for Parsneps. In Celery, R. L. Colt was first, Urwin Stewart, at the Naval Hospital, Brooklyn, second. Many fine Onions were on

the tables; Mr. Petit gained the premium for white, and H. Skinner, of Orange county, N. J., for yellow and red. The premium for the best peck of seedling *Potatoes* was given to F. Hunt, Long Island; and that for the best peck for the table, to S. T. Jones. In *Pumpkins*, the premium for the largest was given to one weighing 125 lbs. exhibited by Abraham Stockholm, of Bushwick, Long Island, but a still larger arrived afterwards, too late for competition, for which a discretionary premium was awarded to J. Wilson, Bloomingdale. Ely Ferry, of Westchester county, had a premium for *Crooked-necked Squash*; and Dr. G. W. Cammann, for the largest squash. Mr. E. Stewart obtained the premium for *White Turneps*; A. Henderson for yellow, and R. L. Colt for *Ruta Baga*. We noticed also some finely grown turneps belonging to Haynes Lord. Discretionary premiums were also awarded and well deserved by John W. Duryea, for 8 extra fine heads of cabbage, and for some Carolina potatoes, exhibited by Reuben B. Clark, of Washington Market, N. Y.

Everything is now-a-days interesting that tends to improve our acquaintance with the potato; we therefore give a copy of a card, attached to a single potato, of good shape and appearance, that was exhibited, and which was as follows:

"One Peach Blow potato, weight 17½ oz., grown upon a reclaimed meadow from sprouts, no part of the potato being planted. Crop estimated from 250 to 300 bushells per acre; all good size; this is one of the largest, but not the largest; one weighed 1½ lbs. but not so good form as this. C. W. Forbush, Worcester county, Mass. Exhibited by J. R. Pitkin, 208 Broadway, N. Y., who saw the crop."

This Horticultural display was altogether a very gratifying sight, and the judges showed a liberal disposition in the amount of premiums awarded, well calculated to encourage exhibitors to exertion for the future countenance of the Institute.

American Pomological Society.

In our notice of the meeting of this society, last month, the list of officers elected, as well as the notice of Mr. Buist's resolution, were not given. We copy the annexed from the *Genesee Farmer*:

The following is a list of the officers chosen:
President—MARSHALL P. WILDER, of Mass.
Vice Presidents—One from nearly every State

and Territory, including the Canadas, California and Oregon.

Secretaries—F. R. Elliot, of Ohio; James H. Watts, of New-York; H. W. S. Cleveland, of New Jersey.

Treasurer—Thos. P. James, Philadelphia.

Executive Committee—Dr. W. D. Brinkle, of Philadelphia; B. V. French, of Massachusetts; Mr. Peters, Dr. H. Wendell, Albany, N. Y.; Dr. J. A. Warder, Cincinnati; and the President, and 1st Vice President ex-officio.

A resolution was offered by Mr. Robert Buist, and adopted, appointing a committee to raise a fund of \$20,000 or more, in subscriptions of \$1 and upwards, to be invested for the benefit of the widow of the late Mr. Downing, or to be expended otherwise in some fitting monument to his memory. The President, Robert Buist, Caleb Cope, H. W. S. Cleveland, B. Hodge, F. R. Elliot, L. Young, D. W. Breckenridge and J. A. Kennicott, constitute such committee.

Pennsylvania Hort. Society.

The stated meeting of this Society occurred on Tuesday evening, October 19, in the lecture room of the Museum building, Philadelphia. CALEB COPE, in the chair. The display consisted of Fruits and Bouquets; of the former, Mr. Cope's gardener exhibited specimens of twelve varieties of Pears: *Duchess d'Angouleme*, *Passe Colmar*, *Napoleon*, *Excellentissima*, &c.; *Reine Claude monstreuse de Bavay* plum, raised under glass. Also, a new plant, *Crowea latifolia*, three pompone *Chrysanthemums*—*Sacramento*, *Surprise*, and *La Miniature*; a basket of cut flowers, having the 98d bud of the *Victoria*; a bouquet of choice flowers, and a basket of indigenous flowers. Mrs. John B. Smith's gardener brought a collection of fine pears: *Duchess d'Angouleme*, *Belle St. Martigne*, *Doyenne Seuille*, *Glout Morceau*, *Beurre d'Arenburg*, *Bamien Van Mons*, *Tyson*, and the *Reinette de Bretagne* apple. Thomas P. James presented pears—12 *Duchess d'Angouleme*, weighing 18 oz., 15½ oz., 14½ oz., &c. *Morelle Bouche*, *St. Dennis*, *Brown* and *Yellow Beurre*, all from dwarf trees. Also, *Frost Gage* and *October* plums. By R. Kilvington, a new plant, *Microspermun Bartonoides*, a very pretty plant. H. W. S. Cleveland, specimens of *Hamburg* and *Muscat Grapes*; S. J. Dick, fine *Isabella Grapes*; Mrs. Krider, *Butter* and other Pears; M. Snyder, *Fall Pippin Apples*; N. W. Roe, *Fall Pearmain* and *Golden Pippin*; A. Parker, *Butter Pears*; J. H. Watts, *Rochester*, *St. Lawrence Apple*. From B. V.

French, Braintree, Mass., Grapes—Diana, Catawba and Isabella.

An interesting report from the committee on fruits, of articles shown to them since the last stated meeting was then read. The chair stated that he had much satisfaction in announcing, that he had received for the society, the first donation in money that was ever given; all the presents which had been received were very few relinquished premiums, and books to a limited extent to the library. Other societies had been recipients in some instances of large amounts and important legacies, and he hoped this was the beginning of a new era. Thomas P. Cope, had given him fifty dollars for the use of the society: on motion, ordered that the thanks of the society be tendered to the donor for the acceptable gift. On motion adjourned.

THOS. P. JAMES, Rec. Sec'y.

Maryland Hort. Society.

The Annual Exhibition of this Society was held on the 22d, 23d, and 24th of Sept. The weather was propitious, and our citizens availed themselves largely of the attractive display, the quality and arrangement of which, was well worthy of their approval. Although comparatively young, this Society gives sufficient evidence of stability, and has already done much towards enlarging the wreaths of Flora and Pomona, which are rapidly encircling our country.

Dr. Edmondson, President of the Society, contributed a very extensive display of specimen plants, mostly of large size and rarity, including many species of Palms, Crinums, Astrapas, Metrosiderius, Erythrina, Cactus, Hoyas, &c. —a fine collection of Achimenes and Roses, altogether forming no mean display of itself, and adding much to the interest of the exhibition.

Mr. John Feast furnished a choice selection of new and rare plants, most of which are of recent introduction, and shown for the first time in this city.

Messrs. S. Feast & Sons, also sent a variety of ornamental plants, consisting of Carolina Princeps, Coffee trees, Crinan amabile, Sago Palm, &c. At a former meeting these gentleman furnished a leaf from their Victoria Regia for the inspection of the curious in these matters. This plant has attained a large size under their care, and is giving a succession of its magnificent flowers.

Further contributions of plants were sent by Messrs. Pentland, E. Kurty, Esq., Mr. Fuss, Thos. Winans, Esq., and others.

Fruit was well represented, both in variety and quantity. Messrs. S. Feast & Sons, and Mr. Jardin, of Washington City, had large collections of Pears; Mr. Fuss, N. Popplein, E. Kurty, Esq., Thos. Winans, and Mr. Kemp, also sent some splendid specimens of varieties, showing that the improved culture of this fruit is not confined to the northern and eastern states.

Foreign Grapes were sparingly produced. A collection from G. Brown, Esq., grown under glass, were of average merit. Black Hamburgs, grown in the open air, from Captain Pracht, were noticed as very fine. Native Grapes were in abundance, and in great perfection; contributors in this class were numerous. The Isabellas from Captain Pracht, and Thos. V. Brundige; Catawbas from Mr. Mitchell and Mr. Popplein; Herbemont's Cluster, from Mr. Mitchell and Mrs. T. Wheeler, were superior. J. Barlow, R. Gibson, Mr. Mohler, Thomas Baynes, and Dr. N. R. Smith, also exhibited fine dishes of various kinds.

Peaches were scarce, the season for them being nearly over. Mrs. Dr. Wolf sent some beautiful seedlings, one of which weighed 12 ounces. M. L. Young also had two samples of fine fruit. Figs, Apples, and Quinces, several dishes of each, were noticed as fine. Dr. N. R. Smith, and W. C. Willson, Esq., contributed Figs; Apples from J. Regester, S. Feast & Sons, L. Young, and Mrs. W. Jessup; and Quinces from Mrs. H. Easter, and W. C. Willson, were among the best. A basket of Siberian Crab Apples, from Dr. Edmondson, were specially noticed.

Vegetables, as usual here, were of a superior character. The principal contributors were Mr. J. Regester, Messrs. J. & D. Lushby, Dr. Edmondson, Mr. Whittemore; Mr. Kemp sent in a dish of green peas; Dr. Edmondson a bushel of St. Helena potatoes, a new variety, equal to, and earlier than the Mercer.

Floral ornaments and bouquets, indeed flowers of all descriptions, were most profuse. The large design of the Messrs. Pentland was much admired, as was also those of Messrs. Feast & Sons, and Mr. Stobie. The exhibition just closed has given an impulse, and awakened an inte-

rest in horticulture, which it is to be hoped will be kept alive. W. SAUNDERS, Cor. Sec.

Oswego Hort. Society.

The September exhibition of this Society, was held on the 14th Sept., 1852, at the City Hall. Hon. E. B. TALCOTT, President, in the chair.

As a testimonial of respect to the memory of the lamented DOWNING, the seats occupied by the president and other officers, were dressed with mourning.

The display of rare flowers and plants was very creditable, and added much to the interest and variety of the exhibition. Some 30 or 40 bouquets and other collections were presented. In addition to a varied and extensive display of dahlias, verbenas, &c., by several contributors, were many varieties of roses, among them 14 choice kinds by Mr. J. W. P. Allen.

The show of fruits, especially of Pears, was very fine, and although the drouth has been severe and protracted, this fruit seems not to have suffered at all. On the contrary, it has improved by it—and especially so in all cases of *malching*.

The following varieties were exhibited by S. Worden. Vicar of Winkfield, Passe Colmar, Beurre Diel, Broom Park, Napoleon, Beurre de Capiaumont, Frederick of Wurtemberg, Compt de Lamy, Louise bon de Jersey, Virgailieu, Bon Chretien Fondante, Dunmore, Summer Bon Chretien, Stevens' Genesee, Washington, Easter Beurre, Buffum, Bartlett, Belle de Bruxelles, Henry 4th, Oswego Beurre, Belle Lucrative, Autumn Superb, Seckel, Beurre d'Amalis, Cushing, Pratt, Onondaga, Brown Beurre, St. Ghislain, Dearborn's Seedling, Andrews, Juliette, Winter Nelis, Flemish Beauty, Ananas, Swan's Egg, Crassane, Glout Morceau, Columbia, Hessel—41.

By J. W. P. Allen: Osband's Summer, Gray Doyenne, Autumn Fig, Louise bon de Jersey, Johnnot, Soldat Laboreur, Belmont, Beurre de Beauchamps, Eyewood, Martin Sec. Juliette de Fontenay Vendee, Beurre de Capiaumont, Belle Adriance, Beurre de Malines, Beurre Crapeaud, Enf. Cygene, Oswego Beurre, Branghm, Onondaga, Chat Brule, Beurre Goubault, Flemish Beauty, Chaumontel, Napoleon, Dearborn's Seedling, Washington, Glout Morceau, Du Deux Foix Leon, Bergamot de Automne, Stevens' Genesee, Bezi de Chaumontel,

Hampshire Bergamot, Beurre Diel, Frederick of Wurtemberg, Urbaniste, Seckel, Colmar d'Arenberg, Benrre Bruneau, Andrews, Bon Chretien Fondante, Bartlett, Hericart, Benrre Chaptal, Beurre d'Anjou, Benrre Dore, Winter Nelis, Countess de Lunay, Cumberland, Beurre d'Amalis, Duchess d'Angouleme, Vicar of Winkfield, Epine Dumas, Summer Francreal, Henry the 4th, Hessel, Fondante d'Automne, St. Ghislain, Beurre Aurore, Surpasse Virgailieu, Beurre Bosc—60.

By Gilbert Mollison: Stevens' Genesee, Autumn Bergamot, Flemish Beauty, Beurre de Capiaumont, Bleeker's Meadow, St. Mamein, Fondante d'Automne, Frank Real D'Hiver, Beurre Diel, Henry the 4th, Oswego Beurre, St. Ghislain, Duchess d'Angouleme, Brown Benrre.

In addition to the above, our citizens generally contributed many varieties of fine flavor. Among the Pears, was a basket of Bartlett's, from Mr. J. W. Bissell, of Rochester. Though very large and perfect, they were much inferior to specimens of that sort on exhibition, grown here.

A premium was awarded to J. J. Fort, for the Bartlett—the fruit grown on an old seedling grafted with this variety about five years ago.

There was a generous supply of Apples and Plums. Of the last, all except two or three kinds were seedlings, and upon these we mainly depend for a supply of this fruit. The budded kinds, in our light, porous soil, furnish usually but a scanty crop. On the other hand, seedlings and suckers produce abundantly.

Of Peaches, there was a moderate display. Some fine Beckwiths were shown by Mrs. F. C. Mills. White Imperial, red rareripe Serrate, and a few other kinds by Mr. Worden, Judge Turrill and others. The crop of peaches in this vicinity is extremely light this year. The prevalence of a destructive leaf blight (which first made its appearance in 1850) seems to be the cause; it is most apparent among the yellow fleshed varieties.

There was a display of some choice Grapes by Messrs. Turrill, Bronson, Allen and others. A premium was awarded to Mr. Allen, for the Sweetwater, and to Mr. Bronson for the greatest variety and display.

The Executive Committee of the Society

having been called together, J. M. Casey presented the following resolutions, which were approved, and unanimously adopted by the Society:

Resolved, That this Society deeply lament the distressing casualty which has removed from the scene of his usefulness, and in the full vigor of his ripened intellect, A. J. DOWNING, the editor of the Horticulturist.

Resolved, That this Society deplore his loss as that of a distinguished benefactor of the human race. Thoroughly versed in the sciences which he loved and studied from his boyhood, and which he has illustrated by his writings; imbued with an earnest zeal in their pursuit to which his powers were consecrated—possessing exquisite, though discriminating taste, he has done much, vastly much, to elevate and adorn the national character. His volumes have gone forth through the civilized world, replete with sound teachings, and practical instruction. Wherever they have been read, the impress of his genius is visible in improved taste—in all the embellishments which render home a paradise. By the social fireside—in town or country—in the populous city and the sequestered hamlet, the traces are everywhere seen of high culture and classic art, taught and inspired by the pages he has written. His books combine, in an eminent degree, the *utile* and the *dulce*—lessons of instruction that have been garnered into all hearts, and that will be cherished as “household words.” Thoroughly American in his character, all his efforts tended to mould into symmetry and order, and to give tone and finish to the elements of the national taste. For these efforts, which have been attended with such signal success at home, and have given her a name and character abroad, his country owes him a deep debt of gratitude.

Resolved, That this Society will co-operate with the Horticultural Societies of the Union, in any plan which may be devised of testifying by some enduring memorial, an appreciation of his virtues, and a respect for his memory.

Resolved, That the corresponding secretary be requested to transmit a copy of the foregoing resolutions to the family of Mr. DOWNING, and that they be published and entered into the minutes of the Society.

Massachusetts Hort. Society.

The Exhibition of this Society the present season, was one of the most magnificent ever witnessed. Especially in the fruit department it was unusually attractive. A more favorable season has rarely been experienced, and the specimens were not only brought forward in profusion, but of a quality surpassing any previous year. Pears which heretofore have been classed among the small kinds, were seen of such a size as to give them a place among the

largest sorts. Indeed, the experience of the season has been such as to give renewed assurance to the cultivators of our vicinity, that a favorable season and proper attention will enable them to grow the pear to as great perfection as they are capable of being produced in this country.—*Hovey's Magazine*.

At the late annual exhibition, the Fruit committee awarded the following prizes:

Largest and best collection of Pears—M. P. Wilder, \$40; Hovey & Co. \$20.

Gratuities—A gratuity of \$7 to A. D. Williams, Josiah Richardson, John Gordon, Sam'l Walker, Messrs. Winship, A. A. Andrews, J. S. Cabot, Josiah Lovett, B. Manning, Otis Johnson; a gratuity of \$5 to J. S. Sleeper, Azell Bowditch, Henry Vandine, W. B. Kingsbury, William Bacon, W. P. Jenney, Jonathan French.

For the best twelve varieties of pears—1st, W. R. Austin, \$20; 2d, Josiah Stickney, \$16; 3d, Samuel Downer, \$12; 4th, Messrs. Hovey & Co. \$8.

For the best dish of pears, twelve specimens of one variety—1st, Samuel Downer, Jr., for Louise Bonne de Jersey, \$6; 2d, Josiah Richardson, for Flemish Beauty, \$5; 3d, George D. Cordwell, for Doyenne Blanc, \$4; 4th, Ezra Cleaves, for Marie Louise, \$3.

Apples. For the largest and best collection of Apples—1st, to B. V. French, the Appleton medal, \$40; 2d do., A. D. Williams & Son, \$20.

For the best 12 varieties of 12 specimens each—1st, Josiah Lovett, \$20; 2d, James Eustis, \$15; 3d, John Gordon, \$12; 4th, J. B. Moore, \$8.

For the best dish of apples, 12 specimens of one variety—1st, Messrs. Hovey & Co., for Porters, \$6; 2d, Josiah Stickney, for Melons, \$5; 3d, M. H. Simpson, Porters, \$4; 4th, Levi Brigham, Nonpareils, \$3.

Gratuity of the Society's Bronze Medals—To Bowen Harrington, Cheever Newhall, Fearling Burr, and Elbridge Tufts.

Assorted Fruit. For the best basket of Fruit—1st, to Otis Johnson, \$10; 2d, to J. F. Allen, \$7.

Gratuity—To W. C. Strong, \$7; Azell Bowditch, \$7; Jos. Breck, \$3.

Peaches. For the best dish of not less than twelve specimens—1st, to C. L. Tarbell, \$5; 2d, to J. A. Kenrick, \$3.

Plums. Gratuity—To Geo. Wilson for Plums \$3; to Henry Vandine, \$3.

Grapes. For the best five varieties—1st, Mrs. Durfee, \$12; 2d, W. C. Strong, \$8; 3rd, Jas. F. Allen, \$5.

For the best two varieties—1st, Jos. Breck, \$6; 2d, H. Hazeltine, \$4; 3rd, Chs. Sampson, \$2.

Domestic Notices.

SALE OF MR. DOWNING'S RESIDENCE.—The last number of the *Home Journal*, has the following letter, dated "Highland Terrace," from one of its editors, N. P. WILLIS, to his associate, G. P. MORRIS. It will be read with interest by all Mr. D.'s friends:

DEAR MORRIS: I was not well enough to drive over to the sale of Mr. Downing's house and grounds, though I intended to have done so, and to have written to you of an event so full of melancholy interest. It brought together a large assemblage of persons of taste and refinement, I am told—more like a gathering to exchange regrets, however, as most of those present were already provided with such a home as was there to be disposed of. A leisurely sale, giving time for the chance want to arrive which it was best fitted to supply, would have been better timed, perhaps. The property sold for eighteen thousand dollars, considerably less than the estimate commonly put upon it. It was bought by Messrs. Ramsdell and Betts, two liberal and wealthy gentlemen of the neighborhood, who, I understand, propose to hold it till they can dispose of it to better advantage for the widow of their deceased friend. It is a kind world we live in, after all; and sweet the inheritance of good will which some men leave behind them unaware!

Full of enlarged love of the beautiful as was Downing's mind, he was by no means visionary. It was, on the contrary, quite a passion with him, for the last two or three years, to contrive such economies and combinations. In architecture and modes of living, as should bring taste and refined comfort within reach of moderate means. He thought the millionaire sufficiently cared for. To embellish and dignify, at little cost, the homes of The Many, was the more recent study from which we should have heard most instructively had he lived. The various simple substitutes he had invented for such ornament as is necessary to taste in building, yet usually too expensive, are doubtless in the possession of his able professional partner, Mr. Vaux, and to him may well be referred those interested to know more of them. Of two only of his practical ideas—subjects of my own last conversation with him—I will endeavor to give some outline, hoping that there are those whom it will serve, though I succeed in recording but a hint of what he intended to convey.

We were speaking of the new facility which railroads afforded for living, the year round, in the country, and of the difference of hospitality, in the city or out of it—the latter being a reception of friends for a longer time and with the addition of a bed. To have a house *large*

enough for the friends one wishes to entertain for *three months* of the year, is to have a house which, for *nine months* of the year, is much *too large*. Housewives complain of too many carpets and curtains, and (expense and trouble quite aside) rooms dismantled and uninhabited in the winter, are dismal to children and servants. A family should fill a house, as a man's frame should fill his coat—the spare pocket or spare bed not interfering with the general fitness.

Downing thought it was not sufficiently remembered how completely the country summer rendered most city luxuries superfluous. In the smallest cottage there is room enough to dine, and the remaining hospitality which the city guest comes to the country to enjoy, is dispensed upon portico and lawn, in grove and garden. Grass is the carpet, sunset the curtains, starlight the frescoed ceiling, he will most admire. With his luxuries thus out of doors, his in-door comforts may be put into very small compass. A room large enough for a bed, a chair and a wash-stand, is, with its open window, as good as the state-chamber of a palace. A dozen such sleeping-rooms may be built at very little expense, and added to the house or grounds like a rear wing, or a bowling alley—the whole structure closed in the winter, and forming no apparent enlargement of the general scale of the building. A dozen friends might thus be entertained without interfering with the usual accommodations of the family, and the hospitality of "a cottage" might thus be quite as bounteous and agreeable as that of "a mansion." Downing, I believe, had some definite plan by which this slightly built addition to the house should be (architecturally) disposed of, but I cannot distinctly recall it, and perhaps the hint is enough.

The other idea, which seemed to me very apt and practicable, was the supplying, at small expense, permanent city lodgings for the occasional use of residents in the country. The frequent errands to town, for shopping, for pleasure, for business, or change of scene, require some better certainty of accommodation than the risk of crowded hotels, as well as more privacy and repose. It is inconvenient, also, to carry wardrobe and baggage to and fro, packing and unpacking, adding very materially to the laboriousness of the visit. The known home being in the country, this occasional city resort might be in any convenient yet unostentatious neighbourhood, and a large number might be accommodated under one roof. Downing thought that a dozen or twenty families might combine to take a house, install a housekeeper in it, and furnish their separate lodgings—a housekeeper being also a cook, who could

supply them with such simple meals as they might require. The house would thus be like a French lodging hotel, and the yearly expense to each tenant, of one or more rooms, would be less than is incurred by occasional visits to the hotels. The idea seemed to me to combine economy, utility and comfort, and to be, moreover, a very timely one, with the present increasing taste for permanent homes in the country.

I will conclude my letter with the hope that some one will give us a memoir of Downing, to be published with his collected works, and to convey a reflex of the beautiful life he led, and the hand-in-hand progress of his taste and his common sense. They were well balanced, and they kept pace and enlarged and brightened, to his dying day. Yours, etc., N. P. W.

REMEDIES FOR THE CURCULIO—A NEW ONE.

—The Farmers' Monthly Visitor publishes the statement of JOSHUA DEAN, who, at the suggestion of the editor of that paper, tried with great success a new remedy which had been used with decided effect by an acquaintance at Nashua. The remedy is, "an ounce of harts-horn (sal ammonia) and a pint of soft soap, dissolved in three gallons of water." This is thrown on the foliage and fruit with a syringe, in the morning, twice or thrice a week. In the experiment described, a simple tin syringe was used, holding about two quarts, and the preparation was applied at four different times to three plum trees, about as many more being left untouched. The result is, "a dozen plums did not fall" from either of the trees operated on, but they hung so full of fruit, that it was needful to prop the limbs—while not a dozen plums remained upon all the others. This, it appears, was the first crop ever obtained from these plum trees.

It will be observed that sal-ammoniac (muriate of ammonia) was used, and not salts of harts-horn or carbonate of ammonia, a more costly article. The sal-ammoniac was pulverized, and mixed with unslaked lime in equal parts, making it easily soluble in water—the cost being for 1 lb. 15 cents, and two cents more for lime and soap, or 17 cents for the whole—cheap enough, to be sure, for an effectual remedy, if this only proves such.

This remedy, like many others proposed of late years, is very easily tried, and the possibility, even, of its success, should be a sufficient inducement. In the case related, it appears to

have been eminently successful, but a single trial is insufficient, as other causes may operate at the same time. The application of thin lime-wash has been very highly commended, yet we have found it quite as much labor to keep the young fruit coated with the lime, as to knock down the insects daily on muslin frames. A neighbor who had for years lost all his nectarines, tried the lime remedy very thoroughly, not only syringing the trees, but applying the lime with a brush to the fruit, whenever rains, heavy dews, or the chafing of leaves removed the coating; yet, after spending about three days in the aggregate upon nine trees, he saved only six nectarines from the destroyers. These we afterwards learned were from a tree under which a calf had been kept confined, and whose presence served to frighten the curculios. If the sal-ammoniac remedy operates in the same way, that is by merely serving as a coating, we should very much question its general value; but if the fumes of the ammonia, which are very strong when the salt is mixed with lime, are the chief repelling influence, it may prove quite efficient. Perhaps the Monthly Visitor can throw some light on this point.

GOOD AND BAD TASTE.—It is a delicate matter to find fault with those, who with great labor and industry have exerted themselves to add to the interest and attractions of our Horticultural exhibitions and State Fairs—especially when the great mass of the people show so little enterprize in supporting them. It can certainly do no harm, however, to point out the difference between good and bad taste, and to enable the industrious and ingenious to expend their labors to better advantage. Good taste can never deviate from fitness and good sense; hence images of the human figure, built, like cobble-stone houses, of roses and asters, are entirely out of place. Flowers are light and decorative merely, and can never be properly used in constituting the solid material of heavy bodies. The human figure may be imitated in stone or plaster, and wreaths of flowers used sparingly in decorating it, but never in building up its solid portions. The same objection, that of unfitness, applies to the construction of banners, stars, and other odd conceits, of flowers. There must be a natural suggestion of the one from the other, which is not the case

when the *American flag* is made of *verbenas*, as we lately saw a most ingenious example at a State fair. Temples and alcoves of flowers are also objectionable for the same reason; but temples and alcoves *decorated* properly with wreaths of flowers, not as a part of them, but as exterior ornament merely, may be in perfectly good taste. We have seen some beautiful objects in the form of baskets of flowers; but when the baskets themselves appear to be composed entirely of flowers, instead of being merely filled with them, or wreathed by them, the incongruity is at once apparent. At the late State Fair at Utica, were some very ingeniously constructed figures in human form, but in most singular bad taste, and which must have cost the exhibitors whole days of labor—while close beside them stood two handsome empty vases, which might have been in a moment rendered infinitely more pleasing by throwing promiscuously into each an armful of flowers. At the late Philadelphia annual show, there were some very richly wrought specimens of flower temples; but we regarded with a great deal more interest the simple structures made of wire, and beautifully covered with climbing plants, which had grown up and covered them, and were then in full bloom.

FOREST TREES OF AMERICA.—Amongst our native Forest Trees, the *ELM* stands pre-eminent. Its beauty of form, and luxuriance of foliage, with its long and graceful branches, renders it peculiarly fitting for a shade tree. Its long life makes it particularly valuable, as more than one generation can enjoy its planting.

I have ever regretted that so ruthless a disposition was made by the early settlers of Rochester, of the beautiful forest trees which abounded here. The *Elm*, *Maple*, *Chestnut*, *Oak*, *Walnut* and *Beeches*, grew in abundance, and were mostly cut down by those whose province it was to clear away the forest. In after planting on our streets for ornament, the "Button Ball," or "Sycamore," was used, as their growth was rapid. Recently the *Elms*, *Maples*, and *Horse Chestnuts*, have been used, so that in time we may enjoy the *shade* which they furnish. One noble old *Elm*, is all that I now remember, of much size, and that is on South Clinton-street, a monument of past time,

when the man of the forest held sway here. It is held in high esteem. May time deal gently with it, and may its age increase until centuries can be allotted as the period of its existence.

Rochester has been called the "City of Trees," and looking down upon it from the cupola of the court house, it has the appearance of a large garden studded with trees.

It is known that in Mr. DOWNING's life-time, he gave a great preference to the native *Elm* of our country, and in his work on "Landscape Gardening," he classes it among those objects in which all that is *beautiful* existed.

He had been heard to say, that under its branches would he prefer his "last of earth," to be deposited—and when his numerous friends shall perform what is the wish of many should be done, may the chosen *Elm* make one of the trees to be planted round his grave. JAS. H. WATTS. Rochester, October, 1852.

WINE AND TEMPERANCE.—Much has been said on this subject, in most of the Horticultural Journals, and all, or nearly all, in favor of the general use of wine, as a prevention of intemperance. I fear sufficient caution has not been used in making this recommendation, and perhaps too superficial an examination has been made of the condition of those countries where it is extensively adopted as a drink. How did so many instances of intemperance occur among the ancients—which induced king Solomon to describe its effects as "woe, sorrow, contentions, babbling, wounds, and redness of eyes;" and as "biting like a serpent and stinging like an adder?" These were rather strong terms to apply to the remedy for intemperance. What was it that caused king Alexander to murder his guiltless friend—and what destroyed his own life? This same remedy for intemperance. What led to the destruction of a whole Scythian army by the Medes? A free use of the same remedy. Now permit me to ask with all respect, hoping an answer with all candor, whether, seeing that distillation has since greatly concentrated the peculiar power of wine, it will be any safer now to acquire a taste for it, with this concentrated liquor standing ready at all times to gratify the increased appetite often produced by habit? If the first man that history informs us of, who-

ever planted a vineyard, became prostrated from intoxication, *without* the addition of the little brandy which is now applied in making wine—a man of such self-denial and extraordinary strength of purpose, as to withstand without finching, the sneers and opposition of the world—can we expect that the *weaker portion* of the human family will *now* do better, if we place this drink freely before them, with half a dozen other and stronger drinks ready to take its place as soon as increased appetite shall render this too weak?

I ask these questions simply for the consideration of the readers of this Journal—which I hope I may be permitted to do as a matter of justice, because what has been previously said has all been on the other side of the question—leaving it entirely with them to draw their own conclusions.

T.

MR. DOWNING.—It was with heartfelt sorrow that I learned of the death of Mr. DOWNING, and I deeply sympathise with his family and the readers of the Horticulturist. I consider his loss a national calamity, and one that I fear is irreparable; and I now suggest to the readers of the Horticulturist, that we raise a fund by contribution, (by the subscribers to the Horticulturist,) to erect a suitable monument near his grave, as a token of our esteem for him. I am willing to pay \$5, or whatever sum may be thought sufficient from each subscriber. E. J. CAPPELL. *Rose Hill, Amite Co. Miss., September 25, 1852.*

GREAT EXHIBITION OF FRUITS.—At the late annual exhibition of the Massachusetts Horticultural Society, at Boston, a "mammoth pavilion," 100 feet wide and 200 feet long, was engaged for the occasion, under which was arranged more than 1,000 running feet of tables. These were occupied with flowers, fruits and vegetables, about two-thirds being filled with fruits. There were more than 3,400 dishes, baskets, &c., many of them containing more than a peck each, amounting in all to more than 100 bushels, about two-thirds of which were pears. The specimens generally were the finest ever exhibited, many being really superb. Several collections were very large. Hovey & Co. exhibited 250 sorts of pears, M. P. Wilder 267, J. S. Cabot 160, B. V. French 150, Samuel Walker 146, Robert Manning 167, &c. B. V.

French had 178 varieties of apples, and others large collections. The whole formed the finest thing of the kind ever seen in this country.

HOUSE PLANTS IN WINTER.—"What is the reason that my plants do not grow so well as Mrs. Jones'? I am sure I take a great deal more pains with them, and water, and nurse, and air them, but all will not do; they are weak, slender, sickly, and some of my best plants have died—while Mrs. Jones seems to take very little care of her's, and yet they grow and bloom beautifully!"

This appeal to us for aid and advice, which has just been made, is not the first complaint of this kind of ill success. The truth is, some plants are actually nursed to death. Care and attention bestowed on plants, *which they do not need*, are worse than no care at all. It is knowing *just what to do*, and doing that, and no more, that gives some persons their success.—Or, as a late writer remarked, there are two great points to be attended to, 1. Not to *let* your plants suffer by neglect; and 2, not to *make* them suffer by interference. We would class the requisites for good treatment, as follows:—

1. Plenty of light.
2. A due supply of water.
3. Proper temperature.

Fresh air, cleanliness, and good soil, are obviously of importance, but are less likely to be neglected than the three first named wants, and we shall therefore add a few additional remarks under these heads.

1. *Light*.—Plants cannot by any possibility have too much of this. The stand should therefore face the window, and be placed as near to it as practicable; and the window should be broad, as little obstructed in its light by outside trees as the nature of the case will admit. But rapidly growing plants require most light; hence such should be placed more directly in front of the window.

2. *Water*.—This must be given according to circumstances. A plant in nearly a dormant state, needs very little—those in rapidly growing condition require considerable. Too much water will make the latter grow slender, but they will bear a greater supply if in a strong light. It must be remembered as a standing rule, that dormant plants may remain compara-

tively in the dark, and with little water; and growing ones should have a good supply of water and a full supply of light. But it must not be forgotten that green-house plants generally are nearly dormant during winter, and the soil must therefore be kept but moderately moist, as the plants in this condition do not pump any moisture from the soil, and little escapes directly by evaporation. Drainage, by filling one-fifth of each pot with charcoal, is of importance.

Temperature.—Many house plants are destroyed by too much heat, which increases the dryness, and both these causes together are more than they can endure. A cool room, never as low as freezing, is best. From 50 to 55 degrees is much better than 65 or 70, the ordinary temperature of living rooms.

Syringing the foliage with tepid water, to wash off whatever dust accumulates, is of use; and the admission of fresh air, when there is no danger of chilling or freezing the foliage, should not be neglected.

DUCHESS OF ANGOULEME—A LONG NAME.—Some of the names of pears, and especially those which are pretty well peppered with French accents, are inconveniently long to most cultivators, among which is the Duchesse d'Angouleme. We observe in the last number of Hovey's Magazine, the editor names the "Duchesse" among other pears; whether it is the Duchesse d'Orleans, Duchesse of Beri, or Duchesse de Mars, we should not be able to decide, were we not aware, as some others are not, that the Duchesse d'Angouleme is sometimes called by this name, which certainly has too much of the "John Smith" indefiniteness about it. No objection of this sort could be made to the name *Angouleme*.

THE CROCUS.—These are generally too much crowded in pot culture; a single root put in a small pot, will give a dozen fine flowers at least, expanded at the same time, of larger size than will be got from three roots in the same size pot. Those who doubt this, have only to make the experiment to be convinced. But these and Hyacinths or Tulips grown in pots, should as soon as potted be plunged under coal ashes, saw-dust or old tan, for six weeks. This may be done in a cellar or out house, and they can then be taken out any time during winter, and

be forwarded to bloom in a green-house, or sitting-room.

MARKET PEARS.—In planting 500 trees for standards to constitute a market orchard, would you plant mostly Virgalieu, as some of my neighbors have done, or a proportion of other sorts, and what should these be? M. W. *Western New-York*.

The Virgalieu (or White Doyenne) as grown in western New-York, as well as in some other portions of the country, is a fruit of transcendent merit, not only for its fine quality, but for its great and early productiveness, and for the hardness of the tree. But the scab and cracking, which renders it "an outcast, intolerable even to sight," as Kenrick designates it, in some parts of the eastern states, has of late years appeared to some extent, both in western New-York and Ohio; and it may therefore be somewhat hazardous to plant it exclusively. We think, under these circumstances, it would be best to make a selection of five or six of the best varieties, foremost of which, and in the largest quantity, we would place the Flemish Beauty, a free growing sort on pear stocks, and bearing fine crops of large, handsome, and excellent pears, ripening about the same time as the Virgalieu. The Onondaga, though not so good, is a large, handsome and productive variety, and would undoubtedly sell well. The Louise Bonne de Jersey, which grows so well on quince; produces so abundantly, that it should form a large proportion of a market orchard. The Bartlett, for an early autumn sort, will not of course be forgotten; and the Vicar of Winkfield, for a late market pear, is deservedly popular for its enormous crops. When the keeping and ripening of winter pears shall be better understood, it is not improbable that they may form a most important class for profitable cultivation, and among which the Easter Beurre for long keeping, will certainly be one of the best, the planter not forgetting that it must have a rich, warm, and highly cultivated soil.

CINERARIAS.—These are beautiful winter plants for a green-house, and may be made much more ornamental if they are grown in large pots, and the flower stems of those that are slight enough to admit of it, are gradually pulled and pegged down to the surface of the pot. In that way, we have seen complete

domes of bloom not six inches high, but from eighteen to twenty-four inches across. This is the time to begin them.

THE ROSTIEZER PEAR.—We have fruited this variety for many years, and have always esteemed it as nearly or quite unequalled in quality among summer pears, standing quite as high among these as the Seckel does among autumn varieties. We are therefore gratified to find in the last number of Hoveys' Magazine, the following remarks by the editor, who, as is well known, has a very extensive knowledge of fruits.

"The Rostiezer is certainly one of the finest of our summer pears; hitherto we have thought it too small to give it a high rank, notwithstanding its delicious, spicy, Seckel-like flavor; but its smallness has been the fault of cultivators; this year it comes up to the full size of a medium pear, being here as large as the St. Ghislain, and we have seen specimens even much larger from other places. It is an enormous bearer, and hangs, as the usual phrase is, "like strings of onions," from the tree; we counted no less than nine handsome pears from one cluster of blossoms."

THE POTATO DISEASE.—Any experiment that tends to throw additional light upon the disease in potatoes, is deserving of consideration, because, although it may not explain the cause satisfactorily, yet it is only by the accumulation of facts, such as the apparent influence of divers modes of growth upon it, that we can hope at last to trace out the principles upon which the presence or absence of the disease is dependant. A. Mons. Bayard has communicated to the horticulturists of Paris, the result of an experiment made by him in an altogether new direction, the result of which he gives in the following account: "Upon my property in the commune of Jaille-Yron, in the department of the Maine and Loire, the potatoes grown in 1850 were generally bad. Before planting, in 1851, I cut some potatoes into sets, and forced into each set, according to its size, one, two or three dry peas. A piece of ground was planted with these sets, and an adjoining piece with sets without peas. Notwithstanding the dry summer, the peas grow strong and flowered, and the potato stems pushed vigorously. The potatoes containing peas produced a crop without disease, which kept well through the winter, and part of them were used the present year in June, for sets. Part of the crop of the sets planted with-

out peas, were diseased. Whilst the above experiment was going on in a field of heavy land, a similar one was made in a kitchen garden, where the soil was light, and the result was the same. The potatoes with peas were healthy, but those without rapidly indicated signs of ill-health. During the growth of the pea stems and potato stems, some were pulled up and examined, and it appeared that the early vegetation of the pea had carried off the excessive humidity from the potato." Assuming that upon repetition this experiment in other parts, is found to give the same results, there can be little doubt that the concluding sentence indicates the cause, namely, the absorption by the roots of the peas of a portion the water contained in the sets. This is a strong evidence in favor of the correctness of the now very general opinion, that excessive moisture has much to do with the disease.

M.

SWEET BOUGH—COLOR OF APPLES.—"Does the Sweet Bough ever have a faint blush? Some specimens exhibited at our State Fair called the Bough, had a blush, but I can find no descriptions that mention it." J. A. D. The Sweet Bough, in common with nearly all green or yellow apples, has a faint blush when grown fully exposed to the sun—and this is so common or almost universal with apples of this class, that pomologists have regarded it as hardly necessary to mention as a distinctive point.

Different seasons, soils, and stocks, produce various results in coloring apples. We have known the Rhode Island Greening, in some years, to be a full deep green, on every part of the tree; and in other years, to have very generally a deep reddish brown cheek. The Porter is usually remarkably free from a brown tinge; yet during the growth of the fruit towards the close of summer, it has been seen to have conspicuous stripes of red in the sun, but which entirely disappeared when fully matured. A long warm season does not always produce the highest color—it was observed a few years since at one of the Ohio fruit conventions, that the specimens from the warm region of Cincinnati were not nearly so much reddened as those from the cooler shores of Lake Erie at Cleveland. An interesting incident under this head once occurred in the case of the first specimens of *Jewel's Red* which we fruited—they maintained

so green an appearance until nearly grown that we were led to doubt their genuineness, but being blown off by wind, they were carried into a room, where in a fortnight, a profusion of red stripes gradually covered the whole surface.

PRESERVING FRUIT IN A FRESH STATE.—Wm. R. and Eliza Smith, of Macedon, N. Y., have devoted nearly their whole time during the fruit season the present and past year, in perfecting their process for preserving soft and perishable fruits in glass jars, in a fresh state, like that when first taken from the tree. Their mode consists substantially in expelling the air from the jars by heat, and then hermetically sealing them; but there are so many minute particulars to be attended to, that one who should remain a whole day in their laboratory, and closely observe every part of the process, would not probably succeed as they do, after a month's trial. In truth, one might as well think to draw a fine picture without experience, by watching for a few hours the brush of an eminent artist. They preserve strawberries, cherries, raspberries, peaches, plums, pears, tomatoes, &c.; and so different are the details of the process for each of these, that the necessary requirements for one sort, would, if applied to others, entirely spoil them. Of their fruits prepared last year, when they had much less experience, some proved imperfect by losing a part of the peculiar fresh flavor of newly plucked fruit, while other specimens which we examined, and more especially the *clingstone peaches*, could hardly be distinguished from those of yesterday's ripening. They are particularly successful with tomatoes, the flavor of which, after months of keeping, we much prefer to that of the specimens which are usually brought early in summer from the Island of Bermuda. They have now on hand a large collection of jars or bottles for distribution, and we hope they may reap some reward for the extraordinary labor, skill, and ingenuity which they have bestowed in perfecting their process.

WINTERING STRAWBERRY BEDS—RAISING SEEDLINGS.—At a meeting of the Cincinnati Horticultural Society, (and we know that they of Cincinnati are not insignificant on this subject,) NICHOLAS LONGWORTH recommended straw or cut straw, or dead leaves, applied in

the fall, as the best thing to do for them. Dr. Mosher used chaff, and found it well adapted to apply to the beds after dressing them in the spring. Tan-bark was objected to on account of the dirt after rains.

Raising Seedlings.—LONGWORTH would impregnate a large and good pistillate, with the best hermaphrodite, (or perfect flowered) and plant the seeds as soon as ripe in good soil in open ground. From 200 seedlings, he would expect 95 staminate, 95 pistillates, and 10 hermaphrodites. They should be planted separate, and the runners cleared till the sorts were proved. GRAHAM advised planting in pots, and driving them ahead with bottom heat—his plants proved mostly staminate. McAVOY would plant in open ground—but select the best plants and force them. He had one bear a year from planting.

GRADUAL AND SUCCESSFUL PROGRESS IN PLANTING.—One of the most interesting fragments of individual history we have lately seen, especially as connected with horticultural pursuits, is contained in the following extract, which we make from the "Notes on Gardens and Nurseries," in the last number of Hovey's Magazine:

"*Residence of Jos. Stickney, Esq., Watertown.*—Strange, indeed, is it, to see how slight a circumstance may change and mould a taste for objects previously of no interest whatever. Some years ago, when the taste for the culture of that gorgeous flower, the *Dahlia*, was carried to a greater extent than now, a gentleman whose time was almost incessantly occupied in commercial matters, and who possessed only a few square feet of garden, in the rear of his dwelling, in the city, was struck with the splendor of one of the exhibitions of this flower, at the rooms of the Massachusetts Horticultural Society, and at once made up his mind to buy a few plants. Spring came, and they were set out;—they flourished—grew,—and all the autumn repaid the careful attention of a zealous amateur, by a brilliant display of flowers. This was grand success for a beginner. Another year came round, and the dozen sorts were augmented to fifty, and still the same success.—Delighted to find himself so well repaid, (unaware it was entirely owing to that love which spared no pains for the welfare of the plants.) the newest and finest sorts were procured, and another season he not only became a competitor for the prizes, but actually carried some of them off!

But with a few feet of land, already over-filled, there was no room for further additions

to his stock, and he must add more or grow a less number of plants; the latter could not be done, and another hundred feet of ground, worth almost as many acres a few miles from the city, was added. But now other objects divided his attention. The grand displays of fruit were so rich and inviting that to be a mere admirer would not do: why should not success attend the growth of fruit, as well as dahlias; there could be no doubt of it. His resolve was made, and the corners were filled with young pear trees. On they went, growing, thriving, pushing up their vigorous shoots, and spreading out their leafy branches, making sad inroads upon the territory of the Mexicans, and in fact showing a disposition to dispute all the ground they had heretofore occupied. Time rolled on, golden fruit hung from their heavily laden boughs, and a rich harvest crowned the efforts of the cultivator of the city garden.

And now accompanying him further, we find ourselves on a beautiful spot, on the banks of the River Charles, in the pretty village of Watertown, overlooking its flowing waters on one side, and the thickly settled plain on the other. Terraces of immense size, covered with trees in full bearing, all the work of half a dozen years, rise one above another, and skirt the river bank. Ascending by several flights of steps, we reach a broad plateau, on which stands the mansion, in the olden style, large, capacious, without ornament, but with that essential of the country house, comfort. It is reached from the front by an avenue from the Milldam road, and is screened in that direction by a grove of gigantic pines, oaks and hickories.

Such is the residence of Mr. Stickney, who was fortunate in purchasing, eight years ago, the estate of Madame Hunt, containing about thirty-five acres, accessible in 20 minutes by the Watertown Branch Railroad, the station being within five minutes' walk. Few places more capable of being made a perfect villa residence, are to be found in the vicinity; and the possession of all this, now under a high state of culture, and affording so much enjoyment to its owner, has been the result of his admiration of a beautiful flower."

THE ENGLISH CRAB, AND THE APPLE.—Prof. MAPES objects to the position taken by the Maine Farmer, that the English Crab is a distinct species from the common apple, and that the latter did not spring from the former as some have supposed, and as Downing and others maintained. Scientific authority and facts appear fully to establish the entire distinctness of the two. The celebrated English botanist, Ray, regarded them as distinct, and later authorities have given the following specific characters, which show them to be more unlike than many others universally admitted as distinct.

English Crab.—Leaves ovate, *acute*, *villous* underneath; styles *bald*; fruit acerb, astringent, austere.

Apple Tree.—Leaves ovate-oblong, *acuminate*, *glabrous*; styles *villous*; fruit more or less sweet.

In accordance with these marked distinctions, is the experience of centuries; for the English crab has been propagated from seed from time immemorial, without changing its character, or presenting any resemblance to the fine varieties of the common apple. It may be observed that the American crab apple, is totally distinct from both.

THE BALDWIN APPLE IN THE NORTH.—The Granite Farmer furnishes the information that in Hanover, N. H., the young Baldwin apple trees suffer severely by winter-killing, and that it is found the cultivation of this fruit will have to be given up, in that region. It appears to succeed best when grafted into full grown trees. Perhaps the mode adopted by the most skillful nurserymen in cold-wintered Wisconsin would be best—that is, to *bud* the trees instead of grafting them, at three or four feet above the ground. This answers well there.

APPLE TREES KILLED BY POTASH.—Medicines in excess become poisons. The New England Farmer mentions the case of an orchard of one hundred and six thrifty Baldwins, that were washed with a solution of a pound of potash in a gallon of water. The owner found in two days that he had killed the whole of his beautiful and valuable trees. Soap suds or ashes in water, are strong enough. Guano is an excellent thing for trees, and salt is sometimes good, but it is one of the easiest things in the world to kill trees with them in excess.

PROFITABLE PEAR TREES.—Wm. S. Lapham of Macedon, N. Y., has a pear tree of the Virgalien or White Doyenne pear, standing in a corner of his house yard, which is probably over 25 years old, and which yielded the present year *fifteen bushels* of fine smooth pears, which sold on the ground at two and a quarter dollars per bushel, or about thirty-four dollars for the crop. One hundred and sixty such trees on an acre—which of the size of this would not be crowded—would at the same rate yield the handsome sum of *five thousand dollars*. If half this were the yearly interest, (and crops nearly as large as this are often obtained) what would be the value of the principal, that is, of one acre of such trees.

Since writing the above, we have been informed of a still larger crop. Israel Delano, of the same neighborhood, gathered from two trees of the Virgalien, forty-two bushels of pears, all of which were sold at two and a quarter dollars per bushel, or 94 dollars for the two.

The productiveness of this variety is very great, and in Western New-York it succeeds admirably. Of late years, however, there have been occasional indications of the scab and cracking, which have rendered this pear worthless in some eastern portions of the Union, and which, as we observe by Dr. Warder's Review, is beginning to appear in Ohio. Hence the prudent planter will not set out this variety exclusively, but will mix in a good proportion of those equally productive sorts, the Flemish Beauty, Louise Bonne of Jersey, Vicar of Winkfield, &c.

THE ROT IN GRAPES.—The following article was read at the meeting of the Cincinnati Horticultural Society, on the 17th of July, and directed to be published:

From recent and careful investigation, I am inclined to believe that the "rot," so destructive to the Catawba grape in our vineyards, has its origin in the same cause that produces the "mildew," and is in fact only that disease in another form.

In examinations with a magnifying glass I have discovered a small cryptogamous plant or fungus, growing on the stem that attaches the berry to the stem of the bunch in diseased specimens. This fungus, by obstructing the circulation of the sap, causes the berry to assume a dark mottled appearance, then to turn black, shrivel, and fall off.

In some bunches all the berries are thus destroyed, in others about half, and in many but few.

Perhaps the "speck" or "spot" may be attributed to the same cause.

The "mildew," as we have generally known it, first appears about the time when the grapes attain the size of small peas, blighting occasionally the whole bunch, stem and all—but usually only the lower portion of it.

There is no mistaking the disease, for it covers the part affected as if dusted with flour.—In a few days the berry and stem turn black and crisp. When the grapes become larger, they appear to be better able to resist the influence of mildew, and the part least exposed to the light and air, the stem of the berry, is then affected, and the fruit finally destroyed by what is termed the "rot." The stem of the bunch, being by this time hard and strong, is not injured, and remains attached to the vine, while the berries fall off.

These diseases are supposed to be produced by sudden changes in the weather from hot to cold, or the reverse—from heavy fogs—from warm showers succeeded by a hot sun, with but little electricity to purify the air, or wind to drive away the noxious exhalations arising from the earth.

An excess of moisture about the roots of the vine in a stiff clay soil, retentive of moisture, may subject the plant to mildew, as also excessive manuring, rigid summer pruning, or deep plowing or hoeing of the vineyard in summer.

Experience alone can prove whether any or all of these conjectures are right.

So much for cause and effect; now for the remedy. In volcanic countries, where the finest grapes are grown, we hear no complaint of mildew. Perhaps an application of ashes and sulphur to our vineyards, by supplying to our limestone land some of the properties of the volcanic soil, might, to some extent, prevent mildew and rot. I therefore recommend as an experiment, on a part of the vineyard, a light top-dressing of ashes in the spring, before hoeing; and to scatter flour of sulphur over the ground, and a part on the vines, the last week in May or the first in June, and again about the first week in July. These applications may possibly prevent mildew to some extent; they can certainly do no harm. Sulphur is freely used in vine-houses to destroy mildew on foreign grapes, and ashes are strongly recommended by one of our most intelligent cultivators, Dr. L. Rehfuess, as a means of supplying to the soil the alkalies drawn from it by the grape.

I have tried sulphur on one square of my own vineyard this season, with good effect, although it was not applied at the proper time.

I would also recommend to avoid stirring the ground after the first hoeing in April or May, to omit high manuring, and to avoid too rigid summer pruning, as all or either may, perhaps, cause injury to the crop of fruit.

I make these suggestions with diffidence, being aware that I am addressing vine dressers of more experience than myself; but I respectfully refer such to my own vineyard for an example of the practical results of my recommendations to others.

In the culture of our native grapes we have much to learn, and it is only by careful and judicious experiments that we shall attain the right knowledge at last. R. BUCHANAN. Cincinnati, July 17, 1852.

Answers to Correspondents.

DAHLIAS.—*Thomas R.* We believe the best seedling Dahlias shown this year by the English growers, have been, Turner's Sir John Franklin; Bragg's Miss Matthews, scarlet tipped with white of great depth; Pope's Lord Byron, rosy salmon, new in color; Turrill's Lady Dalrymple, Edwards' Unanimity, a fancy striped variety; colors, scarlet and deep yellow. But we advise you to wait till they come here; the chances are, Thorburn & Co., of New-York, will have them in the spring. You are not aware perhaps, that if you write to London for them now, as you contemplate, you would have to pay at least \$20 or \$25 a piece for roots of them; on account of their being at present only in the

hands of the original growers or raisers of them; whilst you will get them here for a dollar each, when they come over and are propagated here in the spring by the importer.

HOLLYHOCKS.—*A Gardener.* We have no doubt, if you grow these from seed, you will raise both new and desirable varieties, but you should plant a dozen plants of opposite colors together in a bed; and next year cross impregnate them, and from that seed you may expect better flowers, than from what you buy in the seed stores.

GERANIUMS.—*Frederick S.* If you wish your specimen Geranium plants to blow as early as the first week in May, you should put them in their blooming pots in December, and not stop them afterwards. Those you do not wish to bloom till June, you may keep in small pots through the winter, and re-pot the end of January. In either case, be sparing of water till February.

CALCEOLARIA.—*T. E.* The seed may still be sown, but it would have been better, had you put it in a month ago or so.

PITTSPOURUM.—*Edward.* The common variety that you allude to, will live through the winter, in a frame covered with shutters over the glass, if it is not very damp.

WINTER BULBS.—*W. T.* The earliest bulbs you can get into bloom, are the double roman and paper white Narcissus, and Van Thol tulips; and these you may grow in a room.—*Lachenalla tri-color,* and *Hyacinths,* you may have to follow them.

POLYGALA.—*G.* You have been keeping this too wet, which is the reason the stems turn yellow. It is a fine green-house plant, but not desirable for your conservatory, which you wish to show well in the evening by lamp-light, because the flowers become inconspicuous. On the other hand, you will find *Epacris impressa,* much more showy at night than in the day, in that situation.

PEAR TREE.—*I. S.* Cut back this winter a considerable length, say one-third of every one of the large branches of your old tree, and then put immediately a load or two of stable manure round it; not close to the stem, but in a circle of the diameter that the head of the tree is before you cut it back. Next year you

will have fine young wood, and the following year fine fruit. We have practiced this with the greatest success on very old trees. In the spring just turn in the manure or cover it with earth.

NIGHT-SCENTED STOCK.—*Jas. Spark.* We have not seen that delightfully sweet plant, "*Matheola tristis,*" or night-scented stock, for years. In a visit to England we found it in almost every green-house. On referring to three or four catalogues of our best growers, we do not see it. Can any of our correspondents inform us where it is to be met with? Its fragrance in the evening is most exquisite, and it is of the easiest culture.

TUBEROSES.—*Silas C.* When you take up your tuberose, dry them thoroughly in a green-house or window exposed to the sun, before you put them away. We have no doubt you did not attend to this last year, or else you kept them in a damp place.

RHUBARB.—*James.* If you put large roots into good garden soil, under the stage of your green-house, and cover their crowns over with old boxes or large flower pots, you will have rhubarb early in the year, long before you can get it out of doors, and much better also for pies.

FRANCISCEA.—*C. O. T.* There are several varieties; the old *Franciscea Hopeana,* although generally treated as a hot-house plant, will bear a cold green-house, from which frost is excluded; in that situation it will do very well, and give its fragrant bloom all the summer, but it must be kept very dry in winter.

DOUBLE PRIMROSE.—*T. B.* Your primrose and polyanthus will winter much better in frames, than they would in your green-house. Doubtless if you have kept them in the latter it has been too warm for them. But the frames should be well covered in severe frost.

INSECTS IN HOT-HOUSE.—*E. B.* By no means venture to syringe the plants with the liquid recommended to you. We never heard of the one you name; but we well remember seeing a house of fine plants, some years ago, burnt up by being syringed with a liquid, which the unfortunate gardener had been recommended by "a friend;" and which we found, on examination, to be a weak mixture of muriatic acid and water.

THE

Horticulturist

and

JOURNAL OF RURAL ART AND RURAL TASTE.

The Publisher's Farewell.

SIX and a half years ago the plan of THE HORTICULTURIST was matured and brought before the public. Many of its supporters and subscribers have been so from the commencement, and are familiar with its history; and all know the melancholy fatality which renders its removal expedient. -It now goes into other hands, but its mission and its sphere are unchanged. * We bid it not adieu; for we trust to meet it often—and greet it as a powerful co-laborer in the cause of rural improvement. It has begun a good work, and got strong hold on the good will of all who have been familiar with its pages.

THE HORTICULTURIST was a pioneer work, and has held its ground almost without competition. It has formed a taste for the scientific pursuit of Horticulture in all its branches, and has exerted no inconsiderable influence in placing the arts of taste upon a new basis. The design of this Journal has proved to be one of those happy thoughts, which come only now and then, and lead one to wonder why it had not occurred before—a thought which, though new, strikes favorably upon public sentiment, and soon becomes as common property, as though it never had an originator. The extent to which the editorials in The Horticulturist, have been copied, and the high eulogiums which have everywhere been passed upon them, prove this to a demonstration. The united voice of the country has uttered no unmeaning tribute to the memory of Mr. DOWNING. Every one felt that a tongue, eloquent of beauty, and a pen powerful of good, were motionless, and all became more fully conscious of the influence which had silently but surely been exerted on them, and discovered numerous ways in which this influence had wrought out improvement and added to the sum of happiness. Such sad occasions afford epochs from which one dates back and reaches forward, anxious to gather, in the teachings of the past, hope and encouragement for the future.

It is said that he who rescues a principle from oblivion, or starts a new one into

life, and brings it home to the hearts of his fellow men, is more a benefactor of his race, than he who defends the rights of his country, or fights its battles. This being the case, **MR. DOWNING** and **THE HORTICULTURIST**, are inseparably connected with the refinement and prosperity of our country; for as are the homes of a people so are their lives. It is true that when the political and ecclesiastical history of this century is written, the name of **DOWNING** may not appear, but in that unwritten history of social progress, in the councils of the fireside, which often stamp the character of the man upon the child—in the record of the posthumous judgment of future years we shall find that he was the champion of

“a truth,

Which woke to perish never.”

A beautiful home, as an antidote to the restless roving tendency of the times,—the love of nature instead of the ambition of display—the culture of the mind and the soil, instead of the perilous haste to be rich—these are the principles which distinguish **MR. DOWNING** and **THE HORTICULTURIST**.

The Horticulturist has done more than to inculcate the principles of taste and teach the pleasures of rural life. It has been a scientific and practical work, and by exciting a generous rivalry among gardeners and amateur cultivators, has raised the standard of Horticulture and increased the number engaged in its pursuit. To be assured of this, one need only refer to the reports of Horticultural exhibitions in the early volumes, and contrast them with those of the present year. The competitors, the varieties of fruits, flowers and vegetables grown, and the products, have increased four-fold—and we are only new beginners. One needs a prophetic vision to say what the future of Horticulture in this country is destined to be. Favored, as we are, by soil and climate, we may certainly anticipate brilliant results.

As we have before intimated, **THE HORTICULTURIST** will have our best wishes in the future, as it has had our best efforts in the past. We shall rejoice in its success as arguing well for the stability of society, and affording a well grounded hope for the permanence of our institutions. We shall watch its progress as a sure evidence of the spread of general refinement, and a proof that the germ of a healthy, social American character, which has so auspiciously put forth its shoots, is springing up into fresh life and beauty, and promising a maturity rich in good things. We have full confidence that those who are, hereafter, to have this journal in charge will sustain in a good degree its high reputation and deserve well of its former patrons.

With sincere thanks to all those who have sustained the Horticulturist by their contributions and subscriptions, we commit it to other's hands and other's watchfulness, trusting that it will long be sustained to accomplish its mission and spread beauty and happiness over our land and in our homes.

OF WHAT USE IS RURAL TASTE?

BY B. MUNN, NEW-YORK.

Strange, but not less true, are the inconsistencies of human nature! While most of us are ready to admit the limited extent of our knowledge, how different is our practice from our theory. In the face of this free admission on our part, are we daily arguing, aye, and acting too, upon immatured thoughts, drawing conclusions from false premises, and regulating our conduct upon them, as though our hasty opinions were the unerring decisions of minds possessed of infallible wisdom.

We have been led into this train of thought from the circumstance, that it is not unfrequent still to hear the question asked, "of what use is rural taste." It will be found that the inquiry proceeds either from those who have not devoted, perhaps, an hour to the consideration of the subject, or whose position in life has not afforded them opportunity for the observation, much less the appreciation of the amenities of country life, and the attractions of rural beauty—now it might well be supposed that the advantage, or "use" of rural taste is so apparent, as a means to an important end, that this truth would occur to the mind as quickly as thought presents the question to it. Experience tells us this is not the case, and therefore, we propose to discuss it.

Let us, however, before we proceed to answer the question, thoroughly understand what we are about to discuss; and ask the previous question, what do we mean by "rural taste?" For few things conduce more to the elucidation of an argument, than a distinct apprehension of the subject at starting.

By "rural taste," then, we mean that perception of the combination of beauty *with* utility, in adapting the wilds of nature to the wants of civilized life, which is agreeable to our feelings. So that each natural feature when brought into the foreground of our observation, may be so presented to us, that whilst it is made subservient to our purpose, it at the same time is introduced under a pleasing aspect.

Let us now proceed to our principle inquiry, "of what use is rural taste?"

It is not too much to advance, if we assert that rural taste is itself a necessary adjunct to civilization, the advantages of which the purest utilitarian will admit and advocate. For the practice of rural taste is only the application to rural economy to the very same principles which in city life we regard as too completely matters of course to admit of question. From what source have originated the palace residences of our city merchants, with their gorgeous furniture, their tapestried carpets and their embroidered hangings, but from the indulgence of that taste in domestic affairs, which when directed to rural economy expends its energies in drawing out the beauties of nature for our admiration—while we apply her productions to our use, instead of (as in the former case) availing ourselves of the discoveries of art. Yet, however much we may hear the prudence of particular individuals, called in question, for lavish expenditure upon their town residences, we seldom hear the propriety or the utility of the elegancies of life which they possess, called in question; unless it be by some cynic whose jaundiced eye and ill regulated mind, has been distorted by the suggestions of avarice, or by some pharisaical enthusiast, who seeks to find a merit in refusing the enjoyment of those results of the skill of his fellow men, which the conventionalities of social life have provided for his use.

Let it ever be borne in mind, that the lavish expenditure of the man whose diligent labor has given him the means of surrounding himself with a large portion of the luxuries of life, is the stepping stone to riches for those of his fellow countrymen whose handiwork his liberality purchases. The ascetic miser may by niggardliness increase his ability for

accumulating in the eyes of his associates; but, it is the man who receives with one hand, to spend *prudently* with the other, that in every social community, is the advancer of the wealth of his country. Because he, it is, that in so doing, provides the market for the labor of industry, and the money to pay the well earned wages of the gifted artisan.

But do these principles apply to the question before us? Undoubtedly they do, for if it be conceded that these conveniences of life are proper, and tend to the increase of national prosperity when applied to city life, they will be found equally true when directed to country life and rural taste. Because in the latter case as in the former, it is impossible to put them in practice without some expenditure, be it greater or less, which again affords the means of livelihood or of increased comforts to those engaged in the production of its refinements.

There are other considerations of equal and even of greater weight, which evince as distinctly the "use" of rural taste. Diligence and activity of body and mind are no less beneficial to us, in the pursuit of our innocent amusements, than they are instrumental to our prosperity in business occupations; and whether we turn our thoughts to the private gentleman, or to the merchant retired from busy life—to the farmer, or to the artisan in his cottage, we shall not be disappointed in our expectation, if we calculate upon finding that each one, who employs his leisure hours, be they many or few, in the embellishment of his country home, adds thereby daily accessions to his stock of health, while he at the same time imparts renewed elasticity to his mental energies by their healthy exercise in his favorite pursuits. And we are sure it will be granted that to add increased health to body and mind is to make good "use" of our time, whatever be its employment.

Another and a great "use," (the importance of which it is scarcely possible to over-estimate,) in the cultivation of rural taste, is to be found in the powerful influence which experience bears testimony to its exercising, over the social intercourse of a neighborhood. We could, in support of this view, instance numerous parts of our country which, happily, are ever present proofs of its truth. The kindly relations, the good offices, and the interest in each other's rural enjoyments, which the practice and extension of rural taste in any neighborhood, never fails to draw forth, are ample proofs, that if it be commendable "to love one another;" to contribute to the comforts of our neighbors; and to associate our rising generation with a state of things around them that is calculated to call forth their study of the adaptation of nature to the social wants of man: if these objects are commendable, then rural taste has its "use."

Moreover, if we have failed to convince by our arguments, we have only to appeal to the unerring evidence of the history of the world, to find a proof that there is a "use" in rural taste. For that, be it what it may, which experience shows to have been a constant requirement of every succeeding generation of man, must, by us in our generation, be admitted to be a *want* of the human race. And that which supplies a want which has proved so constant as to be universal in its extent, must be admitted to have its appropriate use. From the garden of Eden to the gardens of Solomon, who "planted himself vineyards, and made gardens and orchards, and planted trees in them of all kinds of fruits, and pools of water therewith, to water the wood that bringeth forth trees;" and again, from the hanging gardens of Babylon to those of the Athenians, (who Meason observes "preferred a residence in the country, and in *villa gardening* borrowed from Asia Minor,") the evidence of history, both sacred and profane, bears one continued stream of testimony to the love for and pursuit of rural taste. The direction of it, has varied with time and place, but its influence upon man has been as continuous as the return of the seasons.

B. MUNN.

DR. HULL'S PAPER ON STRAWBERRIES AND THEIR NUTRITION.

BY SAMUEL W. JOHNSON.

The agricultural and horticultural publications of the present day, are teeming with the applications of science to the processes of husbandry and gardening. This is a fact of happy significance, and indicates how deeply the true means of advancement have taken hold, in the intelligent mind of the community.

Ordinary experience is the most usual, and an invaluable means of attaining excellence in the art of vegetable production.

Extraordinary experience or experiment, is a necessary adjunct to the former.

It is easy to make experiments and to multiply observations. It is just as easy to speculate upon them: but to make complete and *exhaustive* observations, and to plan and conduct strictly pertinent experiments, is quite another thing; as is likewise the arrival at *TRUTH*, which, to even the most patient and profound, often is liable to be confounded with speciousness.

Dr. HULL has made experiments, and written a lengthy article on the "nutrition of strawberries." I propose to inquire dispassionately—what are the merits of his investigations?

The article opens with a quotation from Prof. EMMONS' "*Agriculture of New-York*," as follows: "The soil must possess all the inorganic substances, as well as organic, which are essential to the perfection of vegetables; if any one is wanting it must be supplied."

It will be necessary to remark somewhat upon this statement of Prof. EMMONS. It is in a sense true, and is true as Prof. EMMONS intended it to be understood, yet standing alone, it is capable of gross misconstruction.

The soil must contain all the *inorganic* substances that are essential to the growth of the plant, or the plant will refuse to mature. It must also contain all the *organic elements* of the plant in order to a *profitable* growth, but to grow the lemon, it must not necessarily contain citric acid, because citric acid is essential to the perfection of the lemon; nor need it contain morphine to produce the poppy, although morphine is essential to the perfection of the poppy plant.

In addition to all the inorganic substances of the plant, the soil must contain a quantity of decayed vegetable matter, in order to make it profitably fertile.

Such I deem a true expression of the sense of Prof. EMMONS' proposition.

Dr. HULL remarks substantially, that although this rule is apparently true, and conforms to common sense; yet in its ultimates it admits of exception.

He states the ground of exception as occurring with reference to *tannic acid*, and alludes to other data bearing on the point, which disclose "evidence of the caprice of plants in imbibing nutrition at proportional variance with their analysis."

He says, further: "These discrepancies from the general rule, and the desire to awaken inquiry and experiment to the highest degree, in order to mature the finest fruit, have rendered me a little presumptuous, perhaps, in suggesting another rule of specific nutrition:

"That some fruits—whatever the organic or inorganic analysis of the plant or of the fruit may disclose and seem to require—possess one or more special constituents, each one of which is demanded as an increased, correspondent, and specific nutrition that bears no proportion to that of the exact analysis."

As I understand the above, it implies that certain plants flourish best when supplied with one or more ingredients in quantity greater than indicated by their composition. This is undoubtedly true in some instances. From the experiments of Prof. WAY, it appears probable that ammonia is a means of supplying silica to plants, and therefore may be required in much larger quantity for the growth of highly silicious plants than would be indicated by the nitrogen found in the mature plant. But our present object is to examine Dr. HULL's proofs for his presumed rule. His first statements refer to the inorganic ingredients of the strawberry. Three analyses are quoted, one of the fruit, and two of the plant.

His brief observation, on these analyses, which I need not quote, is sufficiently true—that in “the two analyses of the plant, the analysts coincide in the proportion of the potash: the discrepancy as to the other constituents is striking. In the analysis of the *fruit* by Richardson, the predominance of soda will excite some surprise, although the *potash* holds a second and very important position. At the same time the united analyses of plant and fruit exhibit as the proportion of potash, 59.72, and that of soda only 36.28.” I may add that the analyses show in round numbers from 9 to 20 per cent. of *phosphoric acid*, and 12.26 per cent. of *lime*.

“*Affirmative* of the general rule,” an experiment is adduced as follows: Last year, “a large bed was prepared and divided into three equal portions; one containing *potash* neutralized by muck; another *ashes*, treated in the same manner; and last *phosphate of lime*, (bone dust.) Lines of the same plants, extended across the three soils. Boston Pine,” and 14 other varieties, “displayed a sturdy growth throughout this entire triple tract; at the same time they exhibited a positive preference for the potash over the ashes; for the ashes over the bone-dust. The section of the triple tract, charged with potash, manifests an advantage this season much more conspicuous, the plants and fruit having gained at least one-fourth over their associates.”

In the preceding experiment, certain varieties furnish different results, which Dr. HULL considers “exceptions to the general rule.” “Black Prince and Burr’s New Pine became almost worthless in the same potash tract; while runners of 1850, transferred from these same plants to the natural soil of my ground, well enriched with ordinary stable manure and street sweepings, have this year produced specimens of fruit nearly, if not quite equal to their best reputation. Buist’s Prize also failed under potash nutrition, and developed the richest foliage and finest fruit in the department of phosphate of lime (bone dust.) Hovey’s Seedling failed in a tract of phosphate of lime, yet rejoiced with its luxuriant foliage and fruit in a tract of soil, supplied with *lime* as its main element.”

Reference is next made to a recipe for keeping old strawberry beds in bearing, from the *Friend’s Review*. The application, attended with remarkable results, was as follows:

“Of nitre, of potash, of glauber’s salt, and sal soda, each one pound; of nitrate of ammonia, one-quarter of a pound—dissolved in thirty gallons of water. One-third was applied at a time,” to a bed 30 feet by 40. Three applications being made at intervals of a week. Frequent waterings of soft water, were also used in dry weather.

Various statements are next noticed, from Prof. JOHNSTON’s lectures, with regard to the efficacy of potash and soda.

Dr. HULL concludes from these data, that “the results confirm in the main, the general rule for specific uniform nutrition. Potash, the major element of the analysis, holds the highest representation in the production of plant and fruit; ashes, (potash and lime—the latter, also, an important substance in the analysis) present the next claim, and phosphate of lime (holding a questionable or minor place in the analysis) produces the least satis-

factory impression. Yet the careful observer will perceive, that the *potash* alone, is quite equal to all the requirements of the plant in the department of inorganic constituents, and even here enforces its place as one of the special constituents, which is demanded as an increased, correspondent and specific nutrition, that bears no proportion to that of the exact analysis."

Let us see. The potash of the analysis of the strawberry is, or ought to be, chemically pure; that of Dr. HULL's experiment, was commercial potash, containing all the soluble constituents of wood ashes, sulphates, carbonates, phosphates, and silicates of potash and soda, together with salt of lime and magnesia, and chlorine. This potash, itself containing nearly every inorganic ingredient of the strawberry, is neutralized with muck, which presents the same inorganic composition as wood ashes, and in addition, a large percentage of organic matter.

Dr. DANA says that the addition of potash to muck, furnishes a material equal in all respects to cow-dung, so that the plants which flourished so admirably under "potash nutrition" were supplied in addition to the substances contained in the soil, and no doubt abundantly, with a manure, including all the inorganic, and all the organic substances requisite for the most perfect production! It is easy to see that Dr. HULL's potash is synonymous with *good stable manure*, and "alone, is quite equal to all the requirements of the plant in the department of *inorganic* constituents," &c.

It is not surprising that ashes, treated with muck, should be less valuable than potash, if used in equal proportion, because they contain less soluble matter; and mere bone-dust cannot be supposed to exert the beneficial action that is exhibited by a manure abounding in more soluble phosphates, and all other required ingredients.

In the case of the application of nitre, potash, glauber salt, sal-soda, and nitrate of ammonia, we have potash, soda, and ammonia; sulphuric, nitric, phosphoric, silicic, and carbonic acids. Quite a variety of nutriment, the main efficacy of which is probably due to ammonia and nitric acid; at any rate there is no reason to ascribe it exclusively to potash and soda, as seems to be done by Dr. HULL.

The exceptional cases are in some sense interesting. It is useless to speculate upon the causes of the apparent anomalies, without a basis of repeated and comprehensive experiments, made with a full knowledge of the conditions that may affect their accuracy.

Reserving to the close of the article, some further observations suggested by this part of the subject, I shall notice briefly Dr. HULL's remarks on the organic nutrition of the strawberry. He quotes an analysis, representing the organic constituents of the strawberry to be "*citric and malic acids*, and a large proportion of *mucus sugar*." This mucus sugar is undoubtedly a mixture of *grape sugar*, and some combination of *pectic acid*. Dextrine and woody fibre must be added to the list on analogical grounds. The analysis is obviously incomplete.

Dr. HULL, on the authority of Prof. MAPES, adds *tannic acid* to the list of ingredients. Prof. MAPES asserts, that it exists "in the cortical or external surface of the fruit, that he has detected it by subjecting a *large* quantity of these surfaces to the appropriate chemical tests. He attributes the flavor and fragrance of the strawberry to the specific property of this acid, and has found tan-liquid, a most valuable watering for the plant."

Dr. HULL adduces various instances of the beneficial effects of tan-bark as mulchling, and of tan-liquid as a watering. He assumes, with Prof. MAPES, that *tannic acid* is a specific nutrition for the strawberry.

Every chemist knows that a solution of one part of per-chloride of iron in 200,000 parts of water, gives a characteristic blueish-black tint with tannic acid, and that the 800,000th

may be detected. I know no reason why the converse of this statement is not true—why one two-hundred thousandth part of tannic acid may not be detected by the salt of iron. If with this exceedingly delicate means of discovering tannic acid, Prof. MAPES, could only find it by using a *large* quantity of the cortical surface of the strawberry, it may be questioned whether the tannic acid has a very large influence on the flavor of that fruit! Tannic acid is however readily detected in the leaves and stems of the strawberry, as I have this day observed, by the use of the above mentioned test. Still the quantity is small, as nothing of the intensely bitter taste of tannic acid can be perceived. In order to test this predicate, (Prof. MAPES' presentation of *tannic acid* as a constituent of the strawberry,) and the comparative powers of the citric and malic acids, as "nutrition for the strawberry," Dr. HULL made a series of experiments, on "three rows of each variety, of four different kinds of strawberries, which traverse his triple bed of inorganic manures. The liquids were applied from May 18th to June 23d, twenty-five times. The liquids were:—

Tannic acid—in the form of tan-brark liquor, one gallon to one hundred of water;

Citric acid—juice of one lemon to four gallons of water;

Malic acid—one pint of cider to four gallons of water;

Manure water—manure liquid of the barn-yard;

Poudrette water."

. I must refer the reader to the August Horticulturist, for the details of these experiments. The general result was that the tan-liquor produced the best yield always, as regards quantity, and generally with respect to quality.

This result has its practical value, which cannot be denied; but has it received the correct explanation? Without assuming to give the correct explanation on so insufficient data, I beg to indicate some reasons, that in my mind show that it is yet unproved, that tannic acid has produced these effects. I do not deny that it may be the principal agent; but I conceive that Prof. MAPES' assertion, though having a degree of plausibility, remains to be demonstrated.

What is Dr. HULL's *tannic acid*? Is it the very nearly pure substance? It is tan-liquor—whether fresh or spent, furnished by oak, hemlock, sumach or catechu, he does not tell us!

May there not be many other substances present in it besides tannic acid? We know that the bark of trees is rich in inorganic bodies. Can they be excluded from participating in the effect? The ready passage of tannic acid into gallic acid is well known. Is it not worthy of consideration? It has recently been discovered in the Giessen laboratory, that tannic acid is a compound of gallic acid and sugar, and since it readily decomposes into these two bodies, they may with as much propriety be concerned in the nutrition of the plant. However, we know nothing about it.

In two cases, the strawberries in Dr. HULL's experiments, that he fed with *malic acid*, were adjudged to possess the highest flavor. What is Dr. HULL's malic acid? Cider! containing, according to Dr. Salisbury's analysis, alcohol, sugar, dextrine, malic acid, *phosphates* and *sulphates of the alkalis*, with a little tannic and gallic acids.

Says Dr. HULL—"Here arises an important inquiry—how much of the flavor allowed to the malic acid, must be attributed to the tannic acid which the cider contained?" It may not, perhaps, be irrelevant to inquire what part of the flavor of cider, or of cider apples, may be due to tannic acid?

What effect may the alcohol, sugar, and alkaline, phosphates, and sulphates have had on the strawberry flavor?

Dr. HULL does not specify the age of his cider, a matter of much importance; for it is well known that malic acids and its salts easily enter into decomposition.

Tannic acid is adduced by Dr. HULL, as one of those substances that "is demanded as an increased, correspondent and specific nutrition, that bears no proportion to the exact analysis," because the strawberry contains but a trace of it, while it seems to be so largely appropriated by the plant.

But where is evidence that tannic acid has any thing to do with the nutrition of the strawberry? Have not other cultivators produced strawberries equaling those of Dr. HULL, without application of tannic acid?

I conclude, therefore, that Dr. HULL's experiments furnish no satisfactory evidence of the truth of his closing statement, that the practical cultivator *can* perfect the finest fruit in abundance and richness, by selecting potash from among the inorganic, and tannic acid from among the organic constituents of this delicious gift from the "Giver of all good." At the same time, abundant testimony is furnished of the efficacy of tan-bark as a mulching, and of "potash neutralized with muck," as a fertilizer.

However valuable Dr. HULL's experiments may be, practically, they are entirely too vague to have any effect in establishing theory.

His fertilizing applications are either of very complicated, or of almost unknown composition. Necessarily the quantities of each are also unknown. The soil is unanalysed. Organic and inorganic manures are used on the same plants. The physical and physiological conditions of the plant are not taken into the account. In fine, the sources of error are so numerous, and so little understood, as to be incapable of elimination.

Thus much of criticism, I have thought due to rational culture, and conclude by expressing a hope that I have not misunderstood nor misrepresented Dr. HULL's statements.

SAMUEL W. JOHNSON.

Deep River, Lewis co., N. Y., November, 1852.

ON THE PELARGONIUM.

BY AN AMATEUR FROM ENGLAND.

I am one of those who have been, of late years, in the habit of growing that magnificent flower, the Pelargonium, for exhibition at the Horticultural Societies in London, where those who have attended them, know the engraving that you have given to your readers in volume 5, page 201, of the *Horticulturist*, is by no means an exaggerated representation of the general character of the geraniums produced there. I long to see this, my favorite flower, grown in the same state of excellence in this country, and I by no means despair of having that pleasure; for I was gratified to see some specimens at the exhibition of the New-York Horticultural Society, at Metropolitan Hall, in June last, which, although very far behind the standard of perfection which I am desirous to hold forth for attainment, were, notwithstanding, very fairly grown, and evinced in their general appearance an acquaintance with the plant, which will, I doubt not, enable the grower of them, whose name I do not now recollect, to progress to the highest excellence in their cultivation. I am happy to accord him my meed of praise; and I shall also be glad, if he should not happen to be acquainted with the details of English practice, if I can offer him any suggestions which can further his success.

I hope that upon those who are not aware of the beauties of this family of plants, the geraniums I have just been referring to, will have the effect of creating a desire to possess in their own green-houses and gardens similar specimens. For when properly

grown, the Pelargonium assumes an importance and produces an effect which is gorgeous in the extreme; and can only be equalled, by a few of the inmates of other families in our best collections.

They can be grown in the greatest perfection, without a great demand upon the time of the gardener; with only fire-heat enough to exclude frost; and by judicious pruning, and by propagation early in the season, the bloom can be prolonged over a lengthened portion of the year; and although not at all times in the same perfection, yet always with enough success to well repay the cultivator for his trouble.

I propose in this paper, to give a history of the improvement of the Pelargonium, during the last few years, which I think may interest the present amateurs of the flower, and show what may be done by perseverance and well directed experiments.

The modern history, if I may so call it, of the Pelargonium, may be said to commence with a flower, which some thirty years ago made a great sensation in the floricultural world of London, which was raised there, by a well known florist named DAVEY, and was called by him after himself, "*Daveyanum*." It was a dark crimson variety, of small poor shape, and not equal in that respect to some others of the day, which had broader and more substantial petals; but the color was remarkably attractive, possessing a velvet gloss and depth of tint which was then novel and much admired. Davey, (who was an old florist, and well knew how to make the most of a good flower,) is said to have made a thousand pounds sterling by this geranium, which amount is probably over-rated, although my own acquaintance with what was done by some nurserymen, at the height of the Dahlia-mania in England, a few years ago, by no means renders the supposition of his having done so absurd. Another florist, about the same time, of the name of MOORE, brought out a flower which he called "*Victory*;" this was in shape and quality, much on a par with the Daveyanum, but in color it approached a scarlet, and possessed a good compact habit, and an elegantly shaped leaf, much like the common rose scented geranium. These two flowers, with a white variety, named Macranthon, were the giants of that day, although, I fear their pigmy character, in comparison with our present favorites, would give a very unfavorable impression to modern amateurs, of the tastes of their predecessors. About the year 1824, a flower made its appearance, which may be regarded as something like the first ancestor of the existing race of Pelargoniums. I do not mean to assert that such was literally the case; but that it bore some approach to those points of excellence which have since been improved upon, and brought prominently out in the flowers of the present day. This was a white flower called the "*The new Duchess of Gloucester*," of the character of Macranthon, but so much better a flower, as wholly to supersede it. The amateurs were mad after it, and at three guineas a plant, it found among them ready purchasers; and so popular did it become, that I well remember finding in a nurseryman's, one day in the second or third year it was out, a green-house some 30 or 40 feet long, entirely filled with plants of "*The new Duchess*," and upon my remark at the large stock of one plant, he said he could find a ready market for as many more if he had them.

For some few years after this, no great move was made, to mark particularly the progress of the geranium culture; although each year brought out its new candidates for public favor, which they possessed in a greater or less degree according to their merits. At this day it is not fair to pass judgment upon them; so completely have our notions of the qualities of a really good Pelargonium, been revolutionized in this age of revolutions. Upon looking over a few dried specimens, which I preserved of the flowers of that day, (including among them the celebrated "*Daveyanum*,") I cannot say much in their favor.

One of the prettiest, which I recollect was a great favorite with me, although a small flower, was named "Queenii," in which the softened color of the petal added to a peculiarly neat habit of growth, combined to give an effect of elegance which was very engaging to a florist's eye. There was another, "Eldonii," which was one of the first that possessed the deep suffused blotch of color covering the whole of the upper petals, and which feature in our modern plants, forms one of their most marked characteristics: but that variety was not in other respects a bit better in quality than the others of the time.

About the year 1834 or 1835, (for I have no exact record of the date,) the floricultural world were generally surprised and delighted by the advance made in the culture of this family, by Mr. Foster, a gentleman residing at Clewes, near Windsor, some 25 miles from London, who it appeared had for some time directed his attention to hybridizing the pelargonium, and who then sent out his "Gem." This flower, with reference to its predecessors, was an enormous stride towards the shape that was desired, namely, a perfect circle; and to which it was a much nearer approximation than anything that had been seen before. The color was good, and the foliage and habit large, and every thing that could be desired. Two other flowers Mr. Foster produced, I think the same season, which, although not equal to his "Gem," were still such marked improvements as to excite much interest. But the "Gem" had one great fault, which, no less then than now, was considered fatal to its reputation. The petals "burnt," as it was technically called by the growers; that is a moderate share of sunshine caused a change of color and texture to take place in the upper petals of the bloom, just at the line where the deep blotch of color shaded off into the lighter colored margin. The great advance, nevertheless, in the the plant as a whole, and also as a variety from which to continue the course of hybridizing, created a great demand for it, and also induced many florists, both in and out of the trade to commence, what they had never before thought of, or else had regarded as too uncertain in its results to engage their attention, the systematic improvement of the flower by careful hibridization. There was another flower, which about this time made a great noise in the floral world, as the great man from whom it took its name did in political, namely "WASHINGTON." The color of it was a fine crimson, and it had the much esteemed quality of being a good one to force early in the season, for which reason it was much in request.

Mr. Foster's success, thus begun, did not forsake him. "*Alicea*" was the name given by him the following season, to a seedling which followed in the steps of his "Gem," as regards general good qualities, but of a distinct class as regards color. This flower was sent at the price of three guineas to the public; in stating which circumstance, it should be added, however, that it was generally understood in the fancy, (and I have no doubt that the fact was so,) that Mr. Foster, who is a man of property, did not sell his flowers, but gave the stock of his plants to a nurseryman under some restriction as to the time and mode of disposing of them; and that thus he was the founder of the fortune of one of the nurserymen of London, who is considered to have made an independence principally from this source, and certainly from its instrumentality.

The impetus given to the Pelargonium culture by these flowers, was very great, and thus it was that for the first time the specimens every year assumed an increased size, and in the high degree of culture which the engraved specimen in the "Horticulturist" referred to in the beginning of these remarks indicated.

I was myself at the exhibition at which that specimen was exhibited, and I can testify to the accuracy of the delineation, and the truthfulness of the general idea of the plant conveyed by it. The name of that variety was "*The Priory Queen*," and I passed my

walking-stick through the body of the flower just above the pot, and found that both ends of the stick, (which is within half an inch of three feet in length,) were concealed by the foliage. This was from front to back of the plant; the width was at least a foot greater in extent; so that some idea may be formed of the mass of magnificence which is presented to the eye. It was not, nevertheless, the size of the plant that gave it its importance so much as the more than ordinarily large quantity of flowers which had expanded at once. In point of size, other genariums both at that and many other exhibitions of the time were to be found. They were grown in very large pots, and indeed took up, from their magnitude so great an extent of space on the exhibition tables, that the two principal Horticultural Societies at London, about that time limited the size of the pots for the prizes offered for Pelargoniums, to eight or nine inches, with the view to discourage the continued extension of their magnitude, which was intruding too materially upon the claims of other families of plants, for room to exhibit their beauties.

To return from this digression to my historical sketch. Mr. Foster's success having as I have remarked, set others upon the scent, it was not long before they, like him, were rewarded by the addition of fine varieties. Mr. GAINES, a nurseryman, brought out many new varieties, some of which were very good, but many of little value, among which was one in his catalogue for 1838, now before me, he sent out at *five guineas*, a price that I well remember was thought at the time far beyond its merits. A clergyman of the name of GARTH, was one of the most fortunate; his "*Perfection*" was a much esteemed variety, and the circumstance of its flowers being supported upon *stiff* foot-stalks, which held them up erect above the foliage, a quality wanting in many of Foster's early flowers, which consequently had to be held in position by sticks, was a valuable acquisition. Every year now brought forward several really fine and distinct new varieties; and the emulation which arose between these, the two fathers of modern geranium growing, as they are fully entitled to be called, Foster and Garth, occasioned much interest to their admirers, as I doubt not it did to themselves.

So matters went on until it was first whispered (about in 1840,) and then announced by Foster's "publisher," (as we should say had it been a book,) in a flaming advertisement, that the philosopher's stone was discovered; that Mr. Foster had outdone himself, and that he had produced a flower that was the *ne plus ultra* of perfection. Intense was the interest and anxiety to see it; the price at which it was to come out, *five guineas*, was only calculated to add fire to the flame of the enthusiasm; while the name "*The Sylph*," served to re-engage in aid of his favorite pursuit, all the tender feelings which the amateur had been able to steal from his floricultural affection, to devote to the softer sex! I, for one, went off to Catleugh's place, (that was the name of Foster's nurseryman,) and never shall I forget the pleasure with which I first gazed on the mass of plants of the "*Sylph*," which he had congregated together, and which filled up a large space in one of his long green-houses. The character of the flower was decidedly new, the colors also, while the habit of the plant, when well grown, was unexceptional. At length this variety got into general cultivation, and great were the disputes as to its merits. While one part of the amateurs lauded it to the skies, another as unqualifiedly condemned it. The truth, as is often the case in a war of opinions, rested between the two. It was undoubtedly in many points a most desirable flower, and it had so distinct a character also, that its good qualities became the more valuable. On the other hand, while it flourished most luxuriantly with some, others could not get it to throw a good head of bloom. This arose principally, from its requiring rather more warmth than most geraniums, at one period of its growth.

It would be tedious to enumerate the names of one in twenty of the flowers, which succeeding years have introduced, but those I have above referred to, may be deemed to mark epochs in the history of the improvements of this splendid and now gorgeous family. I shall, in conclusion, do little more than record the names of the persons to whose industry and love for it we are principally indebted for the advanced state of beauty in which we possess it at present, by the ardor for carrying on, which I am glad to announce is in no way declining; for I am continually receiving from my old geranium friends in England, news of the "good things coming."

The next remarkable era, was the appearance of BECK, of Isleworth, then a new name to the admirers of the flower, but one which soon made itself respected. For Mr. Beck had a most fortunate run of success, and for some three or four years he originated varieties, which in a great measure, threw into the shade even Mr. Foster and Mr. Garth's productions; and he has from his first start, maintained up to the present time his standard of excellence. Mr. Foster, however, like a "good man and true," did not allow the more than ordinary success of his worthy competitor to damp his courage, and by steady perseverance he has regained his position, as one of the foremost champions of the present day, as he is the veteran who has uniformly borne the brunt and heat of the battle. During the last three or four years, he has brought forward some splendid sorts. One more name demands honorable mention too meritoriously, to be passed by. I mean Mr HOYLE. He has produced many excellent varieties; and the man who has given to the floricultural world such a flower as "*Hoyle's Crusader*," can well afford to rest upon his laurels and let others gather a wreath for themselves.

There are numerous others and very deserving growers, who well merit the large share of success that has attended their efforts; but having referred to the leading friends of the geranium, I must draw my remarks to a close. B.

APPLE ORCHARDS IN ENGLAND.

BY FRED. LAW OLMSTED.*

There are but few orchards in England, except in certain districts, and in these they abound, and are often very extensive. The inquiry naturally arises, What has given those districts their distinction in this respect? Have they any natural advantages which makes orcharding more profitable in them than in other parts of the country? In reply, I learn that the orchard districts are all distinguished for a comparatively mild climate. They are nearly all in the south and south-western counties, while in the northern and eastern counties I do not know of any. Hereford is a somewhat hilly county, and, as I have remarked, where the hills are too steep for easy cultivation, it is usual to plant orchards; but the south side of such hills is preferred to the north, and, even here, a crop is sometimes entirely lost by a late and severe spring frost. A south-east slope is preferred, the south-east winds being the driest. I suspect another reason why it is found better, is that the south-west winds, coming off the ocean, are the stronger. My own observation has led me to think that the apple-tree is much affected by an exposure to severe winds. Most sorts of trees do not thrive very well upon the sea-shore, and this is usually laid to the account of salt spray or "salt in the air." It will be found, however, that trees grown inland

* From second series of "Walks and Talks of an American Farmer in England."

upon very exposed sites, have the same peculiarities with those in the vicinity of the sea; that is, they are slow of growth and *scrubby*.

Another important circumstance to be noticed, as distinguishing the apple districts, is in the nature of their soils. These are found, however, varying otherwise, invariably to have a large proportion of lime, and generally of potash, in their chemical composition. With reference to this I quote the observations of Mr. Frederic Falkner.*

"Great light has been lately thrown upon the adaptation of soils to particular plants, and it is now easy to account for the predilection, so to speak, of the apple-tree for soils that abound in clays and marls. All deciduous trees require a considerable proportion of potash for the elaboration of their juices in the leaves, and are prosperous, or otherwise, in proportion to the plentiful or scanty supply of that substance in the soil. Liebig has shown, that the acids generated in plants are always in union with alkaline or earthy bases, and cannot be produced without their presence. * * * Now the apple-tree, during its development, produces a great quantity of acid; and therefore, in a corresponding degree, requires alkaline, and, probably, earthy bases also, as an indispensable condition to the existence of fruit."

Again, the same writer:

"It cannot be denied that ammonia, and also the humus of decaying dung, must have some influence on the growth of the tree in such soils, and also in the development of the fruit; but it is most certain, at the same time, that these alone would be perfectly inefficient for the production of the fruit without the co-operation of (the alkaline bases.) The size and perhaps the flavor of the fruit may be somewhat affected by the organic part of the manure, but its very existence depends upon the presence in the soil of a sufficient quantity of those inorganic or mineral substances which are indispensable to the formation of acids."

But it is also found by analysis that lime enters into the composition of the wood of the apple-tree in very large proportions. By the analysis of Fresenius, the ash of the wood of the apple contains 45.19 per cent. of lime and 13.67 per cent. of potash. By the analysis of Dr. Emmons, of Albany, N. Y., the ash of the sap-wood of the apple contains of lime 18.63 per cent. and 17.50 per cent. of phosphate of lime.

But it is not wherever soils of the sort I have described (calcareous sandstones and marly clays) abound in a district, that you find that the farmers have discovered that it is for their interest to have orchards; nor are they common in all the milder latitudes of England; but *wherever* you find a favorable climate, *conjoined with* a strongly calcareous and moderately aluminous soil of a sufficient depth, there you will find that for centuries the apple-tree has been extensively cultivated. Evelyn speaks, 1676, of the apples of Herefordshire, and says there were then 50,000 hogsheads of cider produced in that county yearly. The ancient capital of modern Somersetshire, one of the present "Cider Counties," was known by the Romans as Avallonia, (the town of the apple orchards.) It would not be unlikely that the universal ceremony in Devonshire, of "shooting at the apple tree," (hereafter described,) originated in some heathen rite of its ancient orchardists.

To obtain choice dessert fruit, the apple in England is everywhere trained on walls, and in the colder parts it is usual to screen a standard orchard on the north by a plantation of firs. There is no part of the United States where the natural summer is not long enough for most varieties of the apple to perfect their fruit. In Maine, and the north of New-Hampshire and Vermont, the assortment of varieties is rather more limited than elsewhere, I believe; but I have eaten a better apple from an orchard at Burlington,

* Journal of the Royal Agricultural Society, vol. iv. p. 381.

Vermont, than was ever grown even in the south of England. We may congratulate ourselves then, that all that we need to raise the best apples in the world, any where in the northern United States, is fortunately to be procured much more cheaply than a long summer would be, if that were wanting. The other thing needful, judging from the experience of England for a length of time past record, in addition to the usual requisites for the cultivation of ordinary farm crops, is abundance of lime. This is experience; and science confirms it with two very satisfactory reasons: first, that apple-tree wood is made up in a large part of lime, which must be taken from the soil; and, second, that before the apple-tree can turn other materials which it may collect from the soil and atmosphere into fruit, it must be furnished with a considerable amount of some sort of alkali, which requisite may be supplied by lime.

There is but little else that we can learn from the English orchardists, except what to avoid of their practices. The cider orchards, in general, are in every way miserably managed, and the greater number of those that I saw in Herefordshire were, in almost every respect, worse than the worst I ever saw in New England. The apple in England is more subject to disease; and I should judge, from what was told me, that in a course of years it suffered more from the attacks of insects and worms than in America. The most deplorable disease is canker. This malady is attributed sometimes to a "cold, sour" soil, sometimes to the want of some ingredients in the soil that are necessary to enable the tree to carry on its healthy functions, sometimes to the general barrenness of the soil, and sometimes to the "*wearing out of the varieties.*" The precaution and remedies used by gardeners (rarely by orchardists) for it, are generally those that would secure or restore a vigorous growth to a tree. The first of these is deepening and drying the soil, or deep draining and trenching. The strongest and most fruitful orchards, it is well known, are those which have been planted upon old hop-grounds, where the soil has been deeply tilled and manured for a series of years, with substances that contain a considerable amount of phosphorous, such as woollen rags and bones. The roots of the hop also descend far below the deepest tillage that can be given it; (in a calcareous gravelly subsoil they have been traced ten feet from the surface;) a kind of subsoiling is thus prepared for the apple by the decay of the hop roots. In some parts it is the custom to introduce the hop culture upon the planting of a young orchard, the hops occupying the intervals until the branches of the trees interfere with them. Nothing is more likely than this to ensure a rapid and healthy growth of the trees.

I recommend to those who intend planting an orchard, to have the ground for it in a state of even, deep, fine tilth beforehand, and to plant in the intervals between apple or pear trees some crop, which, like hops, will be likely to get for itself good feeding and culture for several years. Peach trees, and dwarf apples (on Doucain stocks) and pears (on quince stocks,) answer very well for this, and will make a handsome return some years before the standard apples and pears come into bearing.

With regard to the richness of the soil, however, it is said that "although high and exciting modes of cultivation may flatter for a while by specious appearances, it is a grave consideration whether they do not carry serious evils in their train." This caution will remind the American horticulturist of Mr. Downing's recommendation to those planting orchards on the *over-deep* and rich Western alluvial soils, to set the trees upon hillocks. The danger apprehended is in both cases the same, that of too succulent growth. Mr. Williams, of Pitmaston, a distinguished English horticulturist, has found deficient ripeness of the young wood to be the prime predisposing cause of the canker. He recommends every year the shortening in of each shoot of the young unripened wood, which

he says will preserve trees of old "worn out" varieties, as "perfectly free from canker as those of any new variety."

An impenetrable bottom of stone, at not more than three feet from the surface, is frequently made as a precaution against canker. I have been told that in the ancient orchards attached to monasteries, such a flagging of brick or stone is often found under the whole area of the orchard. This would seem at first sight to be directly opposed to the other precaution, of thorough-draining and deepening the surface soil; but it may be considered that the injury which stagnant water would effect is in a degree counteracted when the roots do not descend below the influence of the atmosphere and the heat of the sun. It is not unlikely that these influences would extend to a depth of three feet from the surface, in a soil that had been so thoroughly trenched and lightened up as it necessarily must be to allow of a paving to be made under it. The paving does not probably much retard the natural descent of water from the surface, nor does it interfere with its capillary ascent; the trenching makes the descent of super-abundant water from the surface *more* rapid, while the increased porosity of the trenched soil gives it increased power of absorption, both from the subsoil and the atmosphere, as well as of retention of a healthy supply of moisture. The paving also prevents the roots from descending below where this most favorable condition of the soil has been made to exist. The effect would doubtless be greatly better if thorough-draining were given in addition; but so far as it goes, the under paving and trenching is calculated to effect the same purpose as deep drainage; to secure a healthy supply of heat, light, and moisture to all the roots.

It is evident that the precautions and remedies which have been found of service against canker, whether operations upon the roots or the foliage, are all such as are calculated to establish or replace the tree in circumstances favorable to its general thriving, healthy condition.

This suggests the idea that canker may be the result of a general constitutional debility of the tree, not occasioned by any one cause or set of causes, but resultant from all and any circumstances unfavorable to the healthy growth of a tree; and it is a question whether the same may not be thought of the peculiar diseases of other trees, the peach, the pear, the plum, the sycamore, and perhaps even of the rot of the potato.

ON INDIAN CORN AND THE IMPROVED CULTIVATION OF LAND.

BY B. M., NEW-YORK.

In Agriculture and Horticulture, as in all other sciences, nothing is so well calculated to reward the practical man with a remunerating profit for his labor, as is *thorough* examination of the subject of cultivation, which, for the time, engages his attention. This observation will appear, possibly to many, to involve such a self-evident truism, as to be needless. It is nevertheless not so: for although it is quite true that every one engaged in the culture of land *intends* to give full thought and proper consideration to his subject, and supposes that he *not only intends* but actually *does* it, yet frequently this is far from being, in point of fact, the case.

In this rich country we possess thousands of acres of land, which require but little care to return us crops with which the grower is satisfied, as he gets a fair profit. And with this he is content. But this should not be all. The question is, *does he get from his land all that, with the time, labor and capital employed, it is capable of giving him?*

Whether, in fact, he has *judiciously* expended these upon the object to be attained. The answer to this question may be in the negative, without necessarily involving in it, any impeachment of the judgment of the agriculturist. For he may have exercised his calling in the matter, with all the judgment, and in the full exercise of all the knowledge he possesses. Wherefore, then, it may be asked, is it that the time, labor and capital has *not* been *judiciously* employed? The answer is, it has not been *judiciously* employed, if, upon a more extended knowledge of the subject, it shall turn out, that if the *same amount* of time, labor and capital had been *differently* applied, it would have yielded a larger return. The idea that the beaten track is the only one that can be followed, is no less in horticultural and agricultural pursuits, than in others, the enemy to progress. For, of what utility is the advance of science, and the discoveries of the chemist, unless they can be *practically* applied. The genius of a Fulton, or a Watt, would not have been less worthy of admiration, if prejudice or indolence had refused to apply steam to the uses of the manufacturer; nor would the ingenuity of a Stephenson have shown with less brilliancy if, in order (as some one once gravely proposed) to "keep up the breed of horses," we had refused to be conveyed from New Orleans to Boston by a locomotive engine. But had such follies been committed, the fact could not have been justified to the sound judgment of mankind, by a statement that the manufacturer, without his steam engine, got a remunerating profit, or that the journey from one end of the country to the other was performed as speedily as horses could do it. These principles are equally applicable to the horticulturist and to the farmer; and when applied to him, it will be perceived that the natural consequence resulting from them is, that *he* is lagging behind the manufacturer in intelligence, as well as in solid judgment, *unless* he takes care to appropriate to his *practical use* the discoveries made from year to year in the sciences allied to his calling, and varies his course according to their advance in the age in which he lives.

I have been led into these reflections by the perusal of a paper I met with in turning over the pages of the volume of the Transactions of the American Institute of the city of New-York for 1851, which has just been issued, upon the cultivation of Indian corn, by Mr. JACOB P. GIRAUD, Jr., of Bergen, N. J. In this communication I found that gentleman made, at the commencement of his observations, the remark that "a portion of the land employed" by him, "has, for the last *four years*, been under cultivation for this exhausting crop." This sentence, added to the intelligence indicated in the writer, by the general character of the paper, induced me to go to the Fair of the Institute, which was at the time open at New-York, to see whether any specimens of corn of the same person's growth were exhibited by him this year. I was gratified that I did so; for I found there a large collection of his, consisting of forty or fifty different varieties of corn, the production, as I was informed, of this very same land that had grown the four preceding crops mentioned in the Transactions referred to. I examined the corn carefully, and I found that the grains were swelled out and full to the end of the cob, showing that there had been no lack of food for the plants; and the ears were very large (in some varieties that I measured they were 18 or 20 inches long) and well ripened. Altogether the collection was the most complete and interesting of its nature, that I have ever seen.

These circumstances induced me to give the matter further consideration, and on turning again to Mr. GIRAUD's communication in the Transactions of the Institute, I found a reference in it to a paper in the Transactions of a previous year, containing the detail of the system of culture under which these successive crops have been year after year obtained. In that account I find the statement, that the corn was grown on "clayey loam, and manured in the hill with guano and charcoal, in the proportion of one part of the former to

four of the latter, and the bulk of six table-spoonsful applied, (to each hill I presume) which is covered with from one to two inches of soil before planting. The seed is dropped about six inches apart at right angles, forming a square, with an additional seed in the centre, which, in case all germinate, is removed; more than four plants never being allowed to stand in one hill. The furrows are deeply drawn four feet apart." It is further stated that the ground is cross-plowed and hoed three times. At the second hoeing a handful of unleached wood ashes is distributed round each hill, and if the season should be wet an additional quantity may be advantageously used. At the second hoeing the ground is left level, but at the third a moderate hill is formed, so graduated that the elevation is only slightly perceptible. Mr. GIRAUD further states, "It is my custom, as soon as the corn is glazed, to top the plants at the first joint above the ears, and strip off all the leaves below them, which, when cured at this stage, I am of opinion, contain as much nutriment, as the entire stalk at the period it is usually cut, when topping is not practiced. The husking is performed on the field, and the cows turned in to eat the husks; thus leaving nothing but the naked stalks, which, as soon as the active farming operations are over are cut down, separating them at every joint, (when in large quantity a cutting machine may be used) and covering the field with them, they constitute what I consider a tolerable coating of manure; thus returning to the soil a portion of what it had produced; and if answering no other purpose than that of assisting to keep the ground loose, it is the best disposition that can be made of this, the coarsest and least valuable part of this important plant. If the ground will permit, they are immediately plowed in; they offer no obstacle to succeeding cultivation. As regards quality, perhaps the best I can say of it, that all I could spare was purchased by seedmen at six shillings per bushel of ears."

Such is the account given of this experiment in cultivation, and I have thought it both interesting and profitable to bring it before the readers of the Horticulturist; in the first place, as presenting a mode of culture well worthy carrying out, and in the second, as showing the benefit to be derived from theoretical scientific knowledge, when combined with practical experiments, in the tillage of the earth.

My purpose is not at present to state at greater length than I have above done, the details of the system pursued; they will be found in the volumes alluded to; but rather to call attention to the great importance of the increased study of the true principles of real economy in cultivation, namely, how to get the greatest return for the time, labor and capital employed.

The experiment which I have detailed is only one of very many made of late years, both here and in Europe, all of which point as evidently and as truly to a similar result; although they have not been exemplified in a subject with which we are all so familiar as we are with the present. And I have not the least doubt of the correctness of the conclusion arrived at by the above scientific gentleman in his paper on the subject, that "the important rank occupied by this grain (Indian corn) in the agricultural products of our country, its great capabilities for sustaining animal life, and its being (as I believe is now conceded) indigenous to our soil, it justly claims the attention of every tiller of the land, and notwithstanding the great improvement made by cultivation, *we may still suppose that it is far from its zenith, and its capabilities for production not yet fully known.* Of a grain so important too much cannot be known, and whilst testing the capabilities of a large number of varieties grown under circumstances equal, some good results may be obtained; or at least it is worthy of the effort."

There is good sense in these observations. The time has gone by when experience alone is to be the fitting guide of the farmer or of the gardener. The sciences of vegetable

physiology and of horticultural chemistry, have of late years added largely to our knowledge of the natural laws by which the productions of the earth are brought forth; and nothing short of wilful ignorance, arising from unjustifiable indolence, can be urged by any man in these days of cheap books and extended education, as an excuse for his want of knowledge on these subjects.

But if the principles on which the above experiments were made have been correctly acted upon in the culture of one crop, they can equally be used as guides to improvements in others. All good cultivators now know that the constituent properties of land required for the production of cereal and of root crops are different. And I would instance the above experiments as inducements to horticulturists, and the agriculturist also, to follow up with other crops the line of inquiry suggested by them. That much may and will be done is undoubted; and it is only a question who is first to reap the benefit, and claim the honor that every man so eminently merits, who like Mr. Geraud, seeks to add to the prosperity of his country by a description of knowledge so intimately connected with the great source of her wealth, as her native products. B. M.

New-York, October, 1852.

PEACHES AT THE SOUTH.

BY WM. N. WHITE, ATHENS, GA.

The Peach is the favorite, and in many instances almost the only fruit tree cultivated by our planters. Requiring a soil of but moderate fertility, its culture is so easy, its enemies and diseases are so few, and the return so speedy, that there is no excuse for being without good peaches.

We escape the yellows and the curl entirely, except in our northern importations, and even these generally recover, though checked for a season. We have the borer, but not abundantly, though he is on the increase. The worm in the fruit itself, is also very troublesome here, being much more common than at the north. This insect seems to have a preference for certain white fleshed varieties, and the two kinds most to his taste, appear to be the White Blossomed Incomparable, and Morris White. Of these two varieties, you will hardly find a fruit, without from one to three or four of these insects about the stone.

There is also a species of borer—a white grub, about an inch long, that eats directly under the bark, completely through the sap-wood, entirely around the limb or trunk, generally taking those not over an inch in diameter. Concealed by the bark, he eats quietly through the new wood, and very likely the first intimation you may have of his presence, is that your young peach, cherry, plum or perhaps elm trees, (for he is a general feeder,) are broken square off by the wind or their own weight. Happily, this insect is not very abundant.

Of the above enemies to peach culture, the borer and the worm in the fruit are the most serious, but fortunately they are easily managed. If the ground about the tree be kept clean and free from weeds, the borer will not usually attack it, still less if the stem be protected by a few quarts of lime or leached ashes, placed around the collar of the tree in the spring.

If a lodgment be already effected, the worm can either be cut out, as he lies near the surface, or hot water can at this season of the year be poured about, and into his haunts,

which will destroy the grub without any injury to the tree. The worm in the fruit, is much less frequent in orchards where the pigs are permitted to consume the fallen fruit.

Another somewhat serious difficulty in peach culture, is a result of bad pruning. It is the tendency to overbear and break down, from the excess of the crop. More peach trees in this vicinity, are destroyed or seriously injured from this cause, than any other.

If the tree be properly shortened in, it will not overbear, and if the branches are not allowed to divide in forks, the tendency to break and split off in case of a full crop is prevented.

But in seasons like the present, the loss of peaches by decay while approaching maturity, is more annoying than anything else in peach culture. When the season is warm and wet, very few kinds of peaches will ripen well, especially on moist or very rich soils.

Indeed, the most suitable soil for the peach, is quite the reverse of that which is best adapted to the apple or quince. These delight in low rich valleys or bottoms, and in such soils, the tree and fruit will continue growing vigorously until late in the season, and apples from such locations may be kept well in the winter. But the peach, to ripen sound and high flavored, requires a dry and but moderately fertile soil; a hill-side being as good a situation as any, and it is all the better if it faces the north.

When the trees are planted, the holes may be made large and enriched, to give a good growth of wood, but afterwards applications of lime, ashes or leaf mould are much better than those which excite rank growth, as they do not impair the flavor of the fruit, or cause it to decay.

It is the general belief here, that this fruit can be propagated from seed, with considerable certainty of procuring good peaches. Not that by planting a peach stone, you will invariably get a peach precisely like the one from which it sprung, but the chances are in favor of such a result, while it is still more probable that the variation of the seedling, if any, will be merely in size or time of ripening. But in very many cases, the seedling is precisely the same as its parent. For example, there is a peach known here as the White English, a cling of good quality, described hereafter. It reproduces itself from the seed with remarkable uniformity. Dr. CAMAK has pointed out to me three trees, all seedlings of this variety, and the stones from three different sources, all remarkably uniform in size, shape and quality, and identical with each other and with the fruit from which they originated.

There is also the Blouton cling, described below, that is propagated from seed, with the same certainty. Other instances might be mentioned. From the facts that have come to my knowledge, I am inclined to believe that the stone of a cling is more likely to produce a tree identical with its parent, than one from the free-stone varieties. It is also, the general opinion, that a stone from a seedling, is more likely to reproduce its kind, than if taken from the fruit of a grafted or budded tree. Still free-stone peaches will often reproduce their kind from seed. I have a small free-stone peach, of about second quality, a fine bearer, and one of the earliest, which is very common about here, and invariably raised from the stone. It is much harder than the first rate budded peaches generally, of the same season, bearing a fine crop the present year, when most of the imported varieties were cut off by frost, a quality which renders this peach desirable.

At the north, I believe, the free-stone peaches are universally preferred, and the trees are mostly propagated by budding. Here most tastes decidedly prefer clingstone peaches, and the great majority of trees are seedlings. There I suppose one would be laughed at who should resort to seedlings, with the hope of getting from them a supply of first rate peaches. Here, until very recently, it was the common, and in truth a tolerable success-

ful practice. Is it owing to the different class of peaches cultivated in each section, that this diversity of belief and practice exists?

Here the peach does best budded or grafted on its own roots. Plum stocks they would soon overgrow and break off, while probably they would be no more safe from the borer. We can begin our budding in June, on seedlings planted the previous fall, and as soon as the bud starts, the top being headed down, if on good healthy stocks, they are frequently quite large enough to transplant the ensuing winter, or in a twelve-month from the time the seed was planted. Budding may be continued through the season, until about the middle of October, but early budding is most practiced.

We find it better in budding to leave attached to the bud not only the leaf stalk, but a small portion, say about half an inch, of the lower part of the leaf itself, as it is found that this attracts the sap, and the budding is more likely to be successful. But if we wish to keep the scion a day or two before use, we remove all but the foot stalk. Peaches are not often grafted with you. Here fine trees are raised by cleft grafting in the root during the winter. They may be planted out where they are to stand, and if well cultivated will make a fine growth the ensuing summer.

Communications appeared some time since in the *Horticulturist*, from Mr. Whitfield and Mr. Harwell, the tendency of which was to create doubt whether the peach tree from the north is not, from its period of blooming, unsuited to a southern climate. In fact there exists here a prejudice against all imported fruit trees, arising from the general want of success with the northern winter apples, which, if it was confined to the latter, it would not be worth while to combat, as a large amount of money has been expended upon them with no other benefit to the country than to establish the fact of their general want of adaptation to this climate. But to tell us that the pear or peach from the same source is unsuited to this section, is sheer nonsense, for trees planted here in 1836, and almost every season since, are living witnesses that it is not true.

Since Mr. Harwell's communication was published, two blossoming seasons have passed. There seems to be here a slight but observable difference in the time of inflorescence between the native and foreign varieties, still the latest blooming native peaches continue in flower until the earliest imported ones come into blossom. But upon the whole the native varieties are about a week earlier than the others, in blossoming. The first peach blossoms that appear are usually natives in their first season of flowering, which are generally in full bloom before full grown trees in the same aspect show a single opened blossom. Probably these young trees, not throwing their roots so deeply into the earth, the soil about them becomes sufficiently warm to quicken circulation and bring on inflorescence, while full aged trees throw their roots more deeply in the underlying soil, still cold, are not so easily affected by atmospheric temperature. Or perhaps the constitution of the young tree may be more susceptible to excitement from the spring warmth.

In ordinary seasons here, this difference in the time of blossoming between native and foreign varieties is not of much practical importance. Both were cut off in 1849 by the same frost, unless where protected by buildings adjacent, or some accident of site or exposure. But it might happen if both were equally hardy, that the later period of flowering would give us a crop of the northern peaches, when the others being more fully in blossom were cut off. But practically this is of very little consequence, as both blossom early enough to produce a good crop, except in case of frost, when, as a general rule, we find the high flavored budded peaches, whether native or not, are more tender and easily affected than our common seedlings. The latter were almost the only ones hardy enough to withstand uninjured the frost of last spring.

In endeavoring to establish the opinion that the south must look to her native fruits to fill her peach orchards, would it not be well to limit the boundaries where this becomes a necessity to those sections of country lying upon the gulf of Mexico and its tributaries. It is from that quarter chiefly that we hear of the ill adaptation of northern peaches. Here no such difficulty is experienced, and it would be folly to give up George IV, Early York, &c., to fall back upon the hog peaches, or even the best natives we could get, until a list equal to those rejected could be obtained. It is true that there are some few peaches, native here, nearly or quite equal to the best imported. But the peaches required to make a collection equal to that offered by almost any nurseryman, are scattered from Virginia to Texas, and when gathered at great expense, it is doubtful whether they would be found hardier or better in any respect than those we have. One of our earliest peaches is a native. The best that ripen with us after the middle September are natives, and are just merely good peaches, but our *best* varieties ripen in June, July, and August, and are generally imported varieties. About twenty five varieties will give an abundant succession from the 20th of June until the 1st of November, and the whole collection, freight and all, (except budding five or six natives) will hardly cost five dollars. Now, to gather a collection as valuable, how much money would be required, how much travel in the peach season, how many trees would have to be planted, budded, fruited and thrown away as worthless?

Who would reject the Grosse Mignonne from his list, because it did not happen to originate here. A native of France, it is in England the best peach grown, and here the only peach approaching it in flavor is George IV, a northern variety.

These notes will be concluded in another number, giving the names of the peaches here cultivated, their quality and time of ripening here, and with select lists for cultivation.

Very respectfully yours,

WM. N. WHITE.

Athens, Ga., October 20th. 1852.

ON THE CULTIVATION OF THE STRAWBERRY.

BY AN ENGLISHMAN.

MR. TUCKER—Although I have done but little as a contributor to your valuable periodical, I have been a "constant reader" of it for many a day, and I have been much amused with the papers upon the much vexed strawberry question. Whether in England we get the same quantity of fruit that Mr. Longworth does from the same number of plants, I will not pretend to say; but as the size and flavor of our strawberries leave nothing to be desired, and as they are grown in very large quantities for the London market, I think it may not be uninteresting to many of your subscribers to know something about the mode of growing them there. But the more special reason which induces me to trouble you with this paper, arises from the remarks, which I have seen in many of the numbers of the Horticulturist, upon the qualities of several of the English varieties of the strawberry, and which show that as they are at present grown in this country, they are far from realizing the beautifully luscious and aromatic taste that several of my American friends, who have eaten them in London, agree with me in attributing to them. The difference in this particular is so important as of course to render them here valueless; and it doubtless arises from the difference of climate, which we all know influences materially many fruits even between England and the north of France; consequently we need not be

surprised at the effects produced, where the meteorological chances and the range of them, are so much more sudden and extensive as they are in this country, when compared with England. One of the material differences which operates prejudicially upon this fruit in this climate, is the much greater rapidity of the change from the intense cold of winter to the heat of summer. The strawberry, when roused from its dormant state in spring, requires but moderate warmth to develop its flower stalk and bloom, and again, but a slight addition to that heat to swell and ripen its fruit. Then, again, when it is in bloom and the fruit is just setting, it requires an ample supply of water; and this, in England, it generally gets, and the size of the fruit is very decidedly less if the spring there happens to be dry and hotter than in ordinary years. I can see no reason, however, why gentlemen in this country, who have greenhouses and other plant structures, should not grow strawberries early in the year in pots, and produce fruits equally fine in every particular with that which is grown in the same way in England; because, in those circumstances, the heat of the house can be regulated so as to avoid the prejudicial natural effects which here operate upon them under open air cultivation. I propose, therefore, to give you the system which I pursued as an amateur when in England, (and it is the same as is usually adopted by the gardeners round London, who force this fruit for the early spring market) and by which I had always fruit fully ripe by the second or third week in April.

I must first make, however, a remark upon the varieties of the strawberry to be used. Upon the whole, no variety is found so useful, all things considered, for the *earliest* crop of fruit as the *true* Kean's Seedling; (for there are many round London not true;) this will bear more heat in forcing without loss of flavor, or in quantity, than any other. The usual plan adopted by growers of moderate extent, is either to confine themselves to this variety, and Myatt's British Queen, or to grow their principal stock of these two varieties. There is no question about it, that in England no variety can compare to the British Queen, either for size, flavor, or product; but it will not submit to be rapidly forced, and in the open ground, it is impatient of too much rain, which will injure its flavor and also cause it to burst when just ripe. The flavor of this variety there, is exactly like a strawberry and pine apple combined; and as regards size, I have seen twelve strawberries exhibited which weighed one pound avordupoise; and I will undertake to say that a person walking through London, the end of June or beginning of July, may, without difficulty, at any fruit store, find this variety averaging from 16 to 20 berries to the pound. I believe it to be perfectly possible to grow it here in the same perfection, and simply by trying the following plan which (as before stated) is that pursued in England:

In the month of August, small pots measuring two or three inches diameter are filled with good loam, and placed upon or sunk to their rims in a strawberry plantation; a runner is placed on the top of each pot, and a stone put upon it to keep it there. These are watered occasionally, if dry weather, and in six weeks the plant will have filled this small pot with its roots. It is then cut off from the mother plant and immediately repotted, of course without breaking the ball of roots, into a pot six inches diameter, in good rich loam, not sandy, if it can be had, (for in that I have seen the best fruit grown) and if not, then into a compost of the best garden soil that can be got, and old hot-bed manure, half and half. The pots are then placed in a situation where they get the morning sun only, and being kept moderately watered they remain until the end of the year.

About the first week in January, these pots are brought into the green-house or forcing house, and placed upon a shelf *close to the glass*. This is essential: success must not be expected, unless they are kept up at the top of the house, and feeders, or pans for water, are placed under each. At first, they must not be subjected to much heat; only keep a

moderate temperature at night, letting the sun increase it by day; and at first, also, the supply of water must be moderate, not giving enough to allow it to stand in the pans; but as the plants begin to throw up their blooming stalks, the supply of water may be increased, and the temperature also, but very gradually. When the plants are just coming into bloom, they should be syringed over well every morning, but as soon as the bloom pips begin to open, the syringing should be discontinued until all the fruit is set. As soon as this has taken place, syringing may be resumed while the fruit is swelling, and during this period of growth the feeders should be kept well supplied with water. When the first berries begin to color, the syringe is dispensed with, and the supply of water should not be so profuse, although care must be taken that the plants do not suffer for want of it, and the heat while ripening may be slightly increased. The degree of heat throughout the growth, after the first month, is not of so much consequence, as is the maintenance of a gradual development of the energies of the plant, by avoiding a rapid increase of temperature at any period, for that will usually be fatal to the result.

It is a common thing for these forced plants, when they have yielded their crop of fruit in the month of April, to be put in a cold frame for a fortnight, and then in May, turned out of the pots into a freshly dug piece of ground, where at the end of July, they give a moderate crop of fruit, thus giving two crops before the plant is quite twelve months old. Then from their layers a renewal of the plants takes place, and the same round of culture is resumed for the following year.

Such is the present course of strawberry forcing pursued around London; and yet, I remember twenty years ago, or thereabouts, it was usual, and thought necessary to grow the plants two years in pots, before they were fit to be placed in the forcing house.

I do not think it possible to grow the British Queen in perfection in this country out of doors; but I see no reason why it should not be so in houses, or in flued pits or frames.

AN ENGLISHMAN.

New-York, November, 1852.

THE ROSE AND ITS CULTURE.

BY WM. BACON, RICHMOND, MASS.

The rose is "every body's" flower. The ease with which it is grown makes it so; for it *will* live, as thousands of starved, deformed, sickly plants, put in the out-of-the-way room around the old farm-houses—choked by grass and overrun by weeds, and cropped off by cattle, fully testify. Its beauty makes it a favorite. Eyes whose perceptions are dull in discovering the tasty proportions of form and likeness of color in other flowers, sparkle forth its praises, even when its most perfect developments are seen in the miserable specimens whose parent branches have drawn their sustenance from the same exhausted soil for half a century—dwarfed down to comparative insignificance, and starved into disease. "As beautiful as a rose," has been a common place expression from the time to which our memory goeth not back, and it has been uttered with a dignity of expression which fully indicates the force of the comparison it is meant to establish.

Its fragrance justly entitles it to commendation. When the gentle dews of evening drop their richness on its opening petals, it gives back to the stifled air odors rich in luxury and health. And the gentle breezes of morning waft its perfume to gladden and refresh all who inhale its pure and delicious sweets.

It has always been a wonder to us, as much as this plant is professedly admired, as numerous as its claims are, and as easy of cultivation as it is, that it has, by the mass of mankind, received no more attention. True, almost every country door-yard has a bush or two of some humble, unpretending variety, introduced perhaps by a female member of the family, who, on advice of "the lord of creation," a class far too apt to suppose that any embellishment to the homestead, beyond a plot of beans or a hill of potatoes, as frustrating the designs of Providence, or as coming directly in opposition to his own utilitarian views of things, has given it a location in a sterile and unfrequented corner, where, struggling with quack grass and pruned by ruminating animals, it struggles on in gloomy uncertainty betwixt life and death—doubting in spring whether its feeble energies can produce a bud or unfold it to a blossom. If it does give a stunted bloom, it is such a sad abortion, compared with what it would have produced under favorable circumstances, that it is no wonder that the parent shrub, if it lives at all, lives on unambitious of future beauties and future sweets. Yet every one is loud in their praises of the rose—hailing its beauties with rapture from the first rich tints its opening bud discloses, inhaling its sweets with expanded lungs amid loud panegyrics to its worth, until the beautiful and perfect flower falls into decay.

A beautiful and perfect rose! Will it be uncharitable to suppose that three-fourths of the population of our country have never seen so rare and fascinating a flower? If they have, it must have been at some floral exhibition, where they were so much occupied with the beautiful and wonder-exciting things around them, where they gazed in extatic astonishment on things in general, without going into detail of rare and beautiful objects in particular. It is certain the ill-formed, half-starved objects we have alluded to, cannot belong to this class, and it cannot be supposed that more than one in ten of the landholders in this country are in possession of any other.

Now, although there are a large number of varieties of the rose, and many of them approach some other variety of the species so closely that it requires the eye of a connoisseur to trace the difference; and though all may be so cultivated as to become perfect in their variety, yet there are varieties which, constitutionally, will admit of greater perfections than the rest, under similar circumstances. These, it should be the object of the cultivator to obtain. Although the first cost may be a trifle greater, they require no more ground and no more labor in cultivation than ordinary and inferior kinds, while one bush of the best will yield more satisfaction than half a dozen sickly, mean, almost good-for-nothing plants.

In its demands on cultivation, the rose is modest in proportion to the remunerative satisfaction it affords. It loves a deep loam; so if the soil is shallow, it should by all means be trenched. If straw or coarse manure is laid in the bottom of the trench, a benefit will be found from the continued lightness of soil it will afford, and by its drainage in taking off superfluous water in heavy storms. The soil round the roots should be kept light and free from weeds. Like all plants and animals, it must have a sufficient territory to occupy, and healthy aliment. To afford a desirable supply of food, rotten manure should be forked into the soil around the roots to give an abundant and healthful food for the next year's bloom. Mulching with leaves or coarse manure, after the ground is put in order for the season, is highly beneficial, as it preserves an equilibrium of cold and heat, dry and moisture, essential to the health of the plant.

Its greatest enemy of the insect tribe, that we know of, is the Slug, which fastens on the under side of the leaf, and feasts upon its juices, until it is reduced to a skeleton, disfiguring the plant. The best remedy we know of for its ravages, is found in keeping the

the plant in good health, so as to insure a vigorous flow of nutritive sap and a firm growth of leaves and wood. With us it has succeeded admirably, and we commend it to all whose bushes are affected with a troublesome and wasting enemy.

Yours truly,

W. BACON.

Elmwood, September, 1852.

AN EXHIBITION DAY AT CHISWICK.

BY AMERICUS.

Last summer, business took me to England, and as I went well provided with letters of introduction, I soon found myself domiciled in the family circles of the "Merchant Princes" of London, as they choose to call themselves. I will do them the justice to say, so far as my experience of a few weeks spent amongst them goes, that they at least treat their friends with much hospitality; and appear to enjoy the opportunity of discussing our affairs, and satisfying their curiosity as to our habits, institutions, and progress. I arrived there early in May, and I soon found from the fair portion of my new friends, that the fashionable world were at that season of the year, all busy with preparations for the horticultural exhibitions, of which there are several during the year; the principal ones taking place in May and June. The price of admission is about a dollar, which is high; but it has the effect, in accordance with English notions and habits, of confining these meetings to the middle and more aristocratic classes of the community; consequently they are deemed by the latter, "fashionable;" and although not one person in ten may really care about horticulture, every body who wishes to be thought fashionable, goes; in the first place, because his friends and acquaintances do the same, and in the second place, to show their silks and satins; for it must be understood, that the fashion of the thing is, for every lady to attend a horticultural exhibition there, as the French say, "*en grande toilette*." Being myself a real lover of flowers and fruits also, and desiring not to miss so good an opportunity to see the *beau monde* of England, I readily yielded to the pressing invitation of my fair friends, to take a seat in their carriage on the "Chiswick day."

I must now anticipate a little, in order to put my readers in possession of some information which I obtained after the day was over, in reply to my inquiries as to the way in which these exhibitions are got up and managed. I saw, as I shall presently describe, such vast quantities of things for exhibition collected together, I was not a little curious to ascertain how, in so short a time, so magnificent an assemblage was got into order. For there were some six or seven immense tents, some of them with double rows of tables, extending the whole length of them, covered with plants; numbers of which were in pots or tubs so large and heavy, as to require two, and some four men to lift them. It appeared, in answer to my questions, that the Chiswick gardens have been formed by the Horticultural Society of London, and are under the superintendence of Dr. LINDLEY, one of the principal directors. They occupy about 20 acres of ground, a large part of which is laid out as pleasure ground, and is planted with such rare exotics, as are hardy enough to bear the winter's frost; and the remainder, is devoted to pomology and kitchen gardening. These two last named departments, are principally used for the trial of experiments, and the propagation of new fruits, plants and vegetables. There are numerous plant-houses, forcing-houses, hot-pits, and other requisites for that purpose; and from these departments, whatever is obtained new and valuable, is distributed over the country, through the members of the society, many of whom are nurserymen. In the summer months, three public exhibitions are held in the gardens, and it is with these that we now have to do. Any

person is at liberty to send objects for exhibition, whether a member of the society or not. A printed list of the premiums intended to be given during the year, is issued annually some months before the exhibitions begin; so that all growers may see what they are, and regulate themselves accordingly. When the time arrives, several large exhibition tents are set up in the gardens, and on the morning of the exhibition, but not before, at a very early hour waggon loads of plants, &c., begin to arrive, accompanied by their owners, "anxious for the fray, and eager for the fight." Proper officers of the society are there to give directions as to the particular tent appropriated to each collection of plants, and a spot is pointed out to each exhibitor, as that in which he is to exhibit, and then the latter and his assistants proceed at once to set up their collections. In this way, between four o'clock in the morning, and 10 o'clock, the whole of the large tents are filled: and the persons appointed to adjudge the premiums, proceed immediately to the discharge of the duty assigned to them. This they get through in about three hours, so that by one o'clock, P. M., the hour at which the public are admitted, the whole of the tents are ready, and no one would suppose from the finished neatness of the place, that for the preceding five or six hours it had been a perfect maze of confusion.

Now to return to my fair companions, whom I left rather ungallantly, while I have been giving these details of preparation, for me to accompany them to the exhibition.

Half an hour's drive through the noisy streets of London, put us fairly out upon the road leading to Chiswick, which is about four miles from Hyde Park. The hour was about two o'clock; and before we arrived within two miles of the gardens, we found we formed one continued line of carriages, which reached the whole of that distance. Of course the other end of this line of vehicles was depositing the occupants at the garden as they arrived there, and consequently our progress onward was anything but that of a railway express train! Onward, however, we went, and at length found ourselves safely deposited at a small mean looking door in a wall, which once passed, opened to our view indeed a contrast with the outside. A fine large spreading lawn was before us, upon which was distributed at short intervals, specimens of exotic ever-greens, the foliage of most of which swept the verdant carpet of velvet herbage beneath; and between these elegant shrubs, were interspersed flower beds of all sizes and shapes, filled with herbaceous plants and new annuals, the bloom of which appeared to rival the rainbow in variety and brilliancy. But lover as I am of flowers, for once my attention, after a hasty glance over them, was involuntarily arrested and completely transfixed by the animated portion of the scene around me. Walking amidst these beauties of the floral world, was such a bevy of the "fair daughters of our mother Eve," as I confess induced me to feel but little regret that I was born in these last days of the world, instead of the early ones, when fair Eve herself, "with sweet attractive grace," adorned the earth with her presence.

I noticed in the beginning of my remarks, that the style is for ladies to go in full dress, and here was before me the "elite" of "Albion's fair daughters," radiant in their native beauty, and decked in all the splendor that luxury could suggest, or money purchase. The gardens were filling rapidly; and the tickets taken on that day at the doors, showed that upwards of eleven thousand visitors had attended the exhibition. And as upon these occasions, the softer sex always predominates considerably over our own, some idea may be formed of the effect such an assemblage was calculated to produce. The one thousand and one nights of our Arabian friends, have introduced to the acquaintance of many of us, a sketch of marvels which we have often in boyish mode, longed to see realized, but undoubtedly few if any other seen than a Chiswick exhibition day, can approach so nearly to "fancy's sketch" of such a realization.

My fair friends were evidently much pleased with the meed of commendation which the appearance of their countrywomen called forth from me; and after having politely addressed to me some flattering tributes to the attractions of some of my own countrywomen of their acquaintance, they proposed that we should pass through the tents to inspect the plants. We therefore bent our steps to the quarter of the garden in which the tents were placed. They were filled to excess with visitors, who were proceeding in one direction round the tables, so that each one in turn could view the plants. Down the length of each table was erected a frame work covered with green cloth, forming a back ground to the flowers, which consequently were distinctly visible without difficulty. The tables themselves and the barrier round them were covered with the same material, which gave a finish to the whole, that was not only pleasing, but which relieved the eye in a great measure from the glare arising from such masses of brilliant flowers.

I will now endeavor to give some idea of the contents of these temporary museums of Flora. One of the largest tents was devoted to general collections, amongst which was a most superb assortment of plants from Mrs. Lawrence, the wife of the surgeon of that name, whose celebrity has become world-wide. This lady is the most enthusiastic plant cultivator of that part of the world; and she has for many years been one of the chief contributors to these exhibitions. Amongst her plants I noticed one enormous plant of our *Pimelea spectabilis*, which was one perfect globe of flowers from the surface of the pot, and of which the head of bloom was at least four feet in diameter. Another equally conspicuous plant was an *Epacris grandiflora*, five or six feet high and four feet across, covered with its elegant tubular flowers. An *Ixora*, with its vivid scarlet blooms, bore ample testimony that the skill of the lady's gardener in the hot-house was not behind his greenhouse culture; whilst a white Indian *Azalea*, seven feet high, and forming an immense pyramid from the pot upwards, was so smothered by its myriads of snow-white flowers, that it was impossible to see one inch of the stem, or the half of a leaf upon it. But to notice each of the beauties of this collection would be to tell of every plant in it. I must proceed, or I shall not within my limit, get half through the day. From the general collections, we passed on to a tent filled with orchideous plants. Here, within a space of a few hundred feet, were collected what have been properly termed "Flora's Jewels," from all parts of the world. The Brazils, the Cape of Good Hope, the East Indies and China, had contributed to enrich this gorgeous collection. The very atmosphere appeared alive with flowers; for in many of them the long slender flower stalks were not observable to the eye, whilst the butterfly character of the others added to the fragrance which emanated from them, served to perfect the illusion; and apparently to bear unerring evidence, that in the air around was to be found the "local habitation" of these flying flowers.

From this scene we entered the Geranium tent, from which all other plants were excluded, and well might the happy possessors of such specimens pride themselves on the reward of their perseverance. The worst plant amongst them (if worst was there) was a model of beauty; and none who have not been present at such a sight, can picture to their imagination the elegance and softness of the shading which many of the specimens of this family of plants presented. I observed particularly that the visitors passed more slowly through this part of the exhibition than any other, and the attraction extended to myself as well as to those around me.

Perhaps, of all the objects which delighted me on that day, the tent of *Ericas*, was that which excited in me the greatest surprise. One of the most difficult families of plants to grow in our own country, from the nature of its climate, I was not prepared to expect such perfect bushes as they were. Many of them were very dwarf, but of three or four feet

diameter, and covered with their delicate foliage to the edge of the pot, while their crowns were entirely concealed by their flowers. I learned that two different systems of pruning this family of plants, are adopted by those who grow them extensively. Some cultivators aim at producing a circular head to these plants, so as to present to the eye a dome of bloom; while others, (and they are now among the best growers,) prefer giving the plant a more irregular tree-like outline. I saw many trained in each way, and I give the preference to the latter, as the more truly symmetrical, because the more natural form. Amongst these heaths some of the most striking were *Cavendishii*, *Perspicua nana*, *Ventricosa*, *Superba*, *Densa*, *Hartnelli*, *Splendens*, *Cerinthoides*, and *Bowena*, which I name in the hope of seeing more attention paid to this family amongst ourselves. By keeping them principally in a north aspect, out of the hot rays of the sun, in the summer months, I have succeeded here in growing plants of them in a very fair state of perfection; and I by no means despair (as I see my plants improve daily) of in time having them as large as is convenient to an amateur whose collection is limited. We afterwards passed on to the Fruit tent, which was filled with forced fruit of all descriptions, from the pine apple to the cherry. Many more were the floral wonders of the day; but I must pause, having noticed those principal ones which commanded the greatest share of admiration. There is a very handsome conservatory in the gardens, which is some forty or fifty feet in height, filled principally with Australian and hard-wooded plants, which do not require a very high temperature in winter. Some of the *Acacia* family flourish there in great perfection. After inspecting the flowers we joined the promenade of fashionables in the Arboretum, whilst three military bands belonging to the regiments of guards stationed in London, appeared to vie with each other for the palm of excellence in "discoursing sweet music," with a degree of rivalry equal to that evinced by the horticultural competitors.

At six o'clock the exhibition closes. The exhibitors and their gardeners take possession of the tents; and in two hours more, there is scarcely a plant left of the hundreds which adorned them; whilst the company linger on the lawns until the shades of evening warn them that the pleasure of each happy day must have an end. Such was my "day at Chiswick," and long will the hours I passed there present pleasing reminiscences to my memory.

AMERICUS.

CULTURE OF DWARF FRUIT TREES.

BY P. BARRY, ROCHESTER.*

The attention given at the present time to the culture of dwarf fruit trees, both in the garden and orchard, in all parts of the country, renders the subject one of the most important in the whole range of horticulture; and at a hazard of repeating what we may have heretofore said, we will take this occasion to offer a few hints on their management. We are well convinced from hundreds of letters received from those who are engaged or engaging in their culture, that with all the information that has been in various ways elicited within a year or two past, there yet exists a very general want of that particular kind of knowledge—and not only knowledge, but of that earnestness and appreciation—so indispensable to success. A vast number of persons who never before gave a thought to fruit culture, are all at once tempted into it by the irresistible attractiveness of some dwarf trees, not over three or four years old, which they have seen loaded with mag-

* From the *Genesee Farmer*.

nificent fruit in a neighbor's garden. They look upon this as an example of fruit culture "made easy," and as a proof—as proof it is—that half a life time need not be spent in waiting for their trees to bear. A resolution is at once formed to plant a garden, perhaps an orchard. The ground is plowed after a fashion, the nearest oracle is consulted in regard to the *best sorts*, the trees are procured and planted; and there the work ends. The next year, or year after, the trees are expected to be loaded with such beautiful fruit as those which first awoke their enthusiasm and enticed them to become planters; but alas! where are they? Not one to be seen, perhaps; and not only that, but the trees generally are wanting in that vigorous, luxuriant appearance, that indicates a perfect state of health; they are, in fact, *unthrifty* and *unfruitful*, looking quite as much like dying as living. At this stage of the proceedings, it is suggested by a knowing one that these dwarf trees are a "humbug." "I told you so." Thus results, and thus will result, the hasty, ill-advised planting enterprizes of a multitude of persons. We are by no means drawing upon the imagination in this matter, and we have not the least doubt but that many who read this will recognize the course of proceeding pointed out as bearing a striking resemblance to theirs.

We are very far from being disposed to aggravate the difficulties of fruit culture, or to try to persuade people that there is any mystery in the art of good cultivation, or any obstacle in the way, that common care and skill cannot remove. On the contrary, we aim, and have always aimed, at giving every encouragement in our power consistent with the truth. We must confess, however, that we are frequently surprised at the comparative recklessness with which people embark in planting—spend perhaps ten, twenty, or even fifty dollars for trees, without possessing a single correct practical idea of their treatment; without having consulted any reliable work, or engaged the assistance of a competent person; relying merely upon the uncertain light of a few vague ideas picked up from some very questionable sources. What else can such people reasonably expect but a failure? And if a failure happen them, they should at once take the blame to themselves, and hasten to make amends.

Having thus alluded to what may be termed *mal practice*, we will sketch very briefly the course we would recommend. When a plantation of dwarf trees has been determined upon, whether of 10 trees or 1000, the following considerations should be carefully considered, and all the information in regard to them be obtained from the most reliable sources:

First, *The Soil*. Is it of a suitable character for the purpose? Is it too wet, or too dry? Does it require draining, subsoil plowing, or trenching and manuring? It should always be understood that dwarf trees require a soil of the best quality; and that, too, kept in the best condition. The roots do not extend like the roots of standard trees, and must obtain a liberal supply of food from a small compass. When the soil is right in regard to dryness, depth, and richness, the next consideration should be—

The Trees. These should be on stocks most suitable for dwarfing the species; they should be healthy, vigorous, and of such growth as to be easily moulded in to the form in which they are to be grown. The matter of stocks is one of the most important, and should be considered as though the entire success of the undertaking depended upon it. There is yet, even among experienced growers of trees, a very great want of knowledge on the subject. Most people act with a degree of impatience that in many cases proves fatal to their success. They must have large trees—bearing trees. Tree dealers, as a general thing, say: "Our customers want *large* trees, above all." No man who proceeds upon this principle, can make a fruit garden or orchard that will be either success-

ful or satisfactory. What is it to wait a year, or two years even, compared to having beautiful instead of unsightly trees? We know a gentleman who is at this moment rooting up a plantation made on the principle of the "larger the better," to make room for young well shaped trees. Taste and experience will lead to this in time.

Next comes the question of *Varieties*. Here, instead of making out a list of the *best* without regard to circumstances, such should be chosen, and such only, as have been proved to succeed well on the stocks used for dwarfing, and are of such habits of growth as will make their training a thing practicable. In order to secure these objects, it may be necessary to dispense with favorite and first rate sorts: for it is far better to succeed *well* with a good or second rate sort, than to fail with one a degree better. Neither should a large number of varieties be made a special object; for that and entire satisfaction otherwise can rarely be obtained.

Next comes the arrangement and the planting, involving many practical details to which we cannot now refer particularly.

And when all this is done, there is the *After Culture*; for trees can take care of themselves no more than domestic animals, and more especially when it is desired to maintain and enjoy a high state of artificial culture. An annual pruning, and pruning and pinching at intervals, are necessary; the nature and objects of which must be studied until well understood. Then there is manuring, which must be done in such a way as to meet the wants of the tree, keeping in view the nature of the soil; for the same quantity or kind of manure will not be applicable in all cases.

We will close by recommending to all who are cultivating dwarf fruit trees, to mulch them with half decomposed stable manure from three to six inches deep, on the commencement of winter. This excludes the frost from the roots near the surface, and the snow and rains dissolve it, and send down its best soluble parts to be taken up by the roots the following spring. This supplies the exhaustion of the previous year, and the trees are sustained in an uniform vigor. Thus mulching accomplishes a two-fold object, and may with great advantage be applied to other than dwarf fruit trees.

THE FOREIGN GRAPE UNDER GLASS.

BY A. MESSER, GENEVA

It has been often remarked, in the best publications of the day, that there is advancement in the science and the art of horticulture. The evidences of the truth of this are numerous and satisfactory. And while floriculture and pomology have received a large share of attention, the cultivation of the grape has not been forgotten. This is true, both of the native and foreign varieties. I speak not now of vineyards, planted for the purpose of producing wine, and which are becoming a prominent feature in our agricultural history, especially in that of Ohio; but I refer to the raising of the best varieties of grapes for the table. It is said, that in a neighboring city, there is almost no garden, however small, but has its Isabella or Catawba grape vine. It is gratifying to learn that there is one city so far "in advance of the age;" and if there be others which have made equal progress, let it be published in the Horticulturist.

Here a query presents itself. Have all who have a suitable space, and opportunity to grow the foreign varieties under glass, attempted to do so? Have they ordered a structure

from the manufacturer in Westchester county, or in Flushing? Or if another mode is preferable, have they bought their materials, engaged their mechanics, and in the meantime laid down a rich, well-drained and substantial border? But, says my neighbor, "it will never pay; it may do well enough as an amusement for the rich, who are visionary and eccentric in their tastes and mental habits, but it will prove an unprofitable speculation." True, it may not make returns in cash, dollar for dollar; and yet it is said that good Hamburgs and Muscats sell readily in New-York at six to eight shillings per pound. I do not believe a fine and cultivated taste is to be monopolized wholly by the "upper ten thousand" in the great metropolis. If this beautiful and delicious fruit will not bring the money again, it is better than gold or silver. Who expects to make out the cash value of his luxuries, in dollars and cents? I would say to my neighbor, who is beginning to think seriously on the subject: you can not expect a good vinery, 30 feet long by 15 feet wide, handsomely glazed, to cost less than \$150 to \$170. But if it be properly attended to, and you sell the product for five years after fruting, you can pay the interest on the outlay twice over. But my friend, have you no unprofitable investments, or expensive luxuries? Did that well-furnished coach and matched horses cost less than six hundred dollars? And when I passed through his splendid mansion, and saw the tissue of his carpets, the lustre of his mahogany and rosewood furniture, and the five-hundred-dollar piano, and then going through the garden, I saw the poor, half-starved grape vine, bearing a small crop of fruit, the berries of which were as large as pistol shot, and almost as *hard*, too, I said to myself, "O consistency, thou art a jewel!"

But, says another, "I can not incur additional expense at present; I have a family to be supported, and children to be educated, and everything costs money." The education of children I admit to be an important duty. But what is education? Not a certain given amount of grammar, or Latin, or French, or algebra. Education is effected or obtained by every process which goes to discipline the mind, and enlarge and strengthen its faculties. Take your children with you under the crystal roof, some fine day in April, when all is bleak and leafless without. Take a *leaf* in one hand, and a *microscope* in the other, as did the lamented Downing, a self-taught man, and read to yourself and children a lesson from that theme. Describe to them its nature and tissue—its offices and uses. There are wonders in that leaf. You are making progress in the study of *vegetable physiology*, and begin to see its connection with the theory of horticulture. You may easily imagine yourself a priest of Nature, standing on the vestibule of her temple. Is it nothing that you have so good an opportunity to guide and allure the minds of your children to a study of such beauty and sublimity?

But, says another, "I have no children to love or provide for; I can not incur this expense, and devote my time to attend upon a grapery, which I may not live to enjoy; and when I am gone, I have no assurance that it will pass into the hands of an *amateur* vine-dresser, or one who will appreciate the gift." You have no children? Then you should adopt some without delay, or something in their stead, to love and care for. Take some exotics—strangers from the old world, whose parents came from the classic banks of the Rhine, or the gardens of Fontainebleau, or the sunny slopes of the hills in the south of France. There are numerous families; the Hamburgs, the Frontignans, the Chasselas, and the Muscats, all good. You will find them more docile and manageable, than many children. They will never be refractory, being easily trained; and before you are aware, their adhesive, insinuating tendrils will twine and cling about your heart, and you will be never so happy as when in their company. Plant vines now, and deal kindly with them, before every drop of parental tenderness has exuded from your heart.

If we cultivate the foreign varieties, even in cold houses, we may have fruit matured and ready for the table by the 15th of August. Then the native grapes come into use about the 1st of October, and may be kept till January, so that the season of this delicious fruit, has a duration of four and a half months. Some prefer the flavor of our natives, because it is so highly aromatic and pungent, and agreeably seasoned with acid; but others choose the European, because of their perfect sweetness and superior delicacy, and because they are crisp, melting, and free from a tough core. I think, however, all will agree with me in choosing a large variety, rather than being shut up to one sort. And when your friends call, and you invite them to look into the garden and conservatory, would it not be gratifying to treat them with the fruit not only, but with a panoramic view of the finest countries of the Old world!

"The quality of mercy is not strained,
It droppeth like the gentle dew from heaven,
Upon the earth beneath; it is twice blessed;
It blesseth him that gives, and him that takes."

And this sentiment you may illustrate, by sending a few fresh clusters to that sick friend, who is languishing with fever, and to whom they will be more refreshing than the fabled nectar of the gods. It is no mean emblem of the millennium so long foretold, when "every man shall sit under his own vine and fig-tree, and none to molest or make him afraid."

A. MESSEK.

Genoa, N. Y., November, 1832.

ON THE WATERING OF PLANTS IN POTS.

BY AN OLD AMATEUR.

Many of my friends, who are commencing floricultural pursuits as an amusement for their leisure hours, are continually applying to me, as an old amateur, to know how and when to give water to plants cultivated in pots. The subject is perhaps to the novice, one of the greatest troubles that besets him; although to the experienced, one of the least so. A few general instructions, I think, may elucidate it sufficiently to guide in some measure the young amateur, although from its nature, there is no possibility of giving *specific rules* by which to act.

All plants, because they are in pots, by no means require the same supplies of water; and consequently the indiscriminate watering of the general collection of plants, which usually constitutes the amateur's collection, is at all times injudicious, and frequently very injurious to their well doing. A little reflection will satisfy any one that this must be so. In their natural state, some of our floral favorites are inhabitants of hills, and others of swamps and valleys; some of light sandy soil, others of stiff clay, or of decayed vegetable matter; some again are evergreen, growing more or less all the year; others are deciduous and dormant for many weeks together; some natives of places where the rain falls for months, others of a humid moist climate. From these considerations it must be evident that for plants to be preserved in health and vigor, when confined to the limit of a small pot, upon the contents of which alone it is dependent for the support of vegetable life, the supply of water must be varied to the different species, so as to approximate in some degree to that condition of growth, for which they have been respectively fitted by nature.

The instructions I am about to give will be better understood, by making some general divisions of the subject, and I shall therefore treat of watering under the following heads:

1. *Evergreens*.—And these must be treated as regards such as are succulent, as Geraniums, &c.—such as are ligneous as Camélias.
2. *Deciduous plants*.—As Fuchsias, &c.
3. *Herbaceous plants*.—As Calceolarias, &c.
4. *Bulbous rooted plants*.
5. *Aquatics*.

There are a few general principles applicable to all plants, which I shall in the first place notice.

The great point is, to keep the earth in the pot in such a state of moisture, as will supply all the wants of the plant and no more; with this object, the following remarks must be constantly borne in mind.

Whenever water is given to a pot, it should be in a sufficient quantity to wet the soil equally through. If the earth in which the plant is potted is, in order to suit that particular plant, of a stiff loamy texture, it will require less frequent supplies of water than if it be light sandy loam, or composed principally of leaf-mould or decayed vegetable matter.

If the quantity of roots in a pot is small, with reference to the size of the pot, much less water is required than when the pot is full of roots; because in the former case, the roots will gather moisture for some time from the surrounding soil; in the latter, all the water that is not taken up by the roots soon after the plant is watered, drains away.

If a plant, whose roots do not nearly extend to the sides of a pot, be watered more frequently than the roots absorb it, the surrounding soil becomes saturated with water, which remains in a wet state, wholly unfit for vegetation; the result of which will be decay of the roots of the plant.

When plants have been cut back or pruned, the supply of water to them, should always be considerably lessened; because, the quantity of roots remaining the same, they have, until new shoots are made, a much less quantity of branches and leaves to support, and the want of leaves cuts off the source by which the water is dissipated in the atmosphere after it has supplied the wants of the plant.

When plants are growing rapidly, that is making their annual supply of shoots for the year, and throwing out and perfecting their flower buds, they require much more water than when in a dormant state.

With reference to my last remark, it must always be remembered, that inasmuch as both indigenous and exotic plants are very variable, in the seasons of the year at which the above occurrence takes place, so the use of the watering pot must be regulated by the judgment of the florist, and not by the season of the year, *solely*; although, undoubtedly both such plants as are dormant, as well as such as are vigorous in their growth in the summer season, will require a more liberal supply, (having regard to their habit of growth) than the same species would require in the winter under the same circumstances.

Thus much I wish to inculcate as general principles; and I will now proceed to make some remarks on the treatment under each of the above heads.

1st. *EVERGREENS*.—*Such as are succulent; such as are ligneous*.—The succulent class of evergreens require a liberal supply of water during their growing state, (particularly such of them as bloom in the hot months of the year,) but a very scanty supply in winter. Geraniums for instance, when they are shooting up for bloom, should be watered on the surface of the soil, at least three or four times a week; then in another month, every morn-

ing; and syringing over head will be found daily beneficial to this, and all similar classes of plants at this stage of their growth. In the hot summer months, they will require water morning and evening. In autumn, the quantity of water must be materially lessened; and from the setting in of winter until the middle of February, it is scarcely possible (if they are kept during that time in a place no warmer than is sufficient just to exclude frost,) to keep them too dry. If succulent plants are found to turn black and mouldy, either in the stem or leaf, that is evidence that they have had too much water, with reference to the temperature at which they have been kept. The principal things, for geraniums and other succulents of similar growth, in the winter months, are light and sun, with all the air that can be given them without exposure to frost. The only chance of saving a plant that has partially become black and mouldy in the leaf from over-watering, is to place it in a warm room for a week, where the air is dry, so that the water contained in the soil of its pot may evaporate as speedily as possible. If these kinds of plants are kept too short of water in winter, their leaves will, many of them, turn yellow, and drop off. But of the two extremes, (excess of water or the want of it,) this one is comparatively of little moment, because in the spring, presuming the stems and roots to be sound, new shoots clothed with luxuriant foliage will come forth; but on the contrary, if the plant be over-watered, the succulent stem being saturated with moisture, which a low temperature prevents it from throwing off by evaporation, the fibres of the stem decay, and its texture is destroyed. These observations apply to all succulent evergreens.

With respect to the *ligneous class of Evergreens*, they do not require so large a quantity of water during summer, *in proportion to their size*, as the succulent; although they also at that season, must be liberally supplied; but in winter, they require more in proportion than the succulent. The great point in ligneous evergreens, is to have a *good drainage* at the bottom of the pot; and to plant them in a soil of open texture, so that the water may pass freely through it, as soon as it is given to the plant. In winter, these plants will require water in a moderate quantity, perhaps once a week or ten days; but much must depend on the size of the pots. The larger the pot the less frequently will it require water. The camellia, the acacia arnata, corneus and epacris, may be instanced as families to which these remarks apply.

Evergreens should *never* be allowed to stand in feeders or pans to catch the surplus water, so as to keep the soil in a saturated state.

2d. **DECIDUOUS PLANTS.**—From the time that this class of plants lose their leaves, until they shoot again, they require but very little water; many will do without it altogether if their pots are of tolerable size, as the moisture contained in the pot when their leaves fall is often enough to keep the roots in a healthy state. Others, and such as are in small pots, will require a moderate supply occasionally, but only just to prevent the soil becoming dust dry. As soon as they show signs of growth, and commence shooting into leaf, water should be very gradually supplied to them, and the quantity increased as their shoots grow and their leaves become developed. As soon as they have acquired a "new coat" of foliage, they should be treated as ligneous evergreens during the summer months. Many deciduous plants are among the most beautiful we have, and as they do not require much light in their dormant state, they may then be placed in any convenient situation, where they are out of the reach of frost.

3d. **HERBACEOUS PLANTS.**—This class require to be watered much on the same system as the succulent evergreens; but in the fall and winter months, particular care should be taken not to allow water to get into the centre of the plants, or into the socket at the base of their leaves; because, unless it quickly evaporates, the water will there become stagnant,

and rot the stem of the plant. Many herbaceous plants, with thick large foliage, should, in very hot weather, be shaded the whole of the day, or only have the morning sun for an hour or so.

4th. **BULBOUS ROOTED PLANTS.**—Many of this class of plants vegetate and bloom in the fall and winter months. At whatever season of the year a bulb vegetates it should be planted in moist soil; but very little water should be supplied until it has shot up an inch or two; then the water should be given more liberally, and increased in quantity as the plant grows. When in full bloom, the water may be lessened, (taking care, however, to keep the soil constantly moist) in order the longer to enjoy the beauty of the flower. As soon as it is out of bloom, water must be *freely supplied* in order to enable the leaves to be matured, and the bulb to become thereby re-established. Most young florists err upon this subject. Upon the proper growth and maturity of the leaves, after bulbous rooted plants are out of bloom, *depends the formation of the flower-bud within the bulb for the ensuing year*; and unless this important point is duly attended to, no after treatment can induce the blooming of that bulb, until an intervening year's growth of leaves has given the plant the opportunity to form its bloom.

After a plant is out of bloom, therefore, water should be continued in good quantity until the ends of the leaves turn yellow, which, under such circumstances, is a certain indication that the bulb is matured preparatory to its state of rest. This, in common bulbs, as Hyacinths, Narcissus, &c., will be in from one to two months after their bloom. From that period the supply of water should be gradually lessened, and in a few days altogether discontinued. Then the pots may be laid on their sides, when the soil will dry, and the leaves and *true* roots will wither. The bulbs may then be taken up and put away, to be replanted at the proper season.

5th. **AQUATICS.**—Plants of this class are either such as are wholly submerged under the water, throwing their leaves and flowers to the surface, or such as, when in a growing state, like to have their roots only constantly in water. Of the former sort but few enter into the amateur's collection, and they require but little notice, because they either in their natural state remain evergreen, or they retain their submerged situation during their dormant state. The other class of aquatics will, many of them, submit to the ordinary treatment of herbaceous plants whilst in their state of growth. The well known lily of the Nile, or Calla, will serve for an example of them. But this class is much benefitted by having a feeder or dam of water constantly under their pots, for the whole of their season of growth; the cessation of which is indicated by the ends of the leaves turning yellow, as with the bulbs. Whilst in a dormant state the soil should be kept *just moist*; by which term I mean that it should only contain so much water as will allow of its being crumbled between the fingers without adhering to them.

Yours,

AN OLD AMATEUR.

Domestic Notices.

MASSACHUSETTS HORTICULTURAL SOCIETY.—

Being at Boston last month, we availed ourselves of the opportunity to visit the weekly exhibition of this celebrated society, at their spacious hall in School street. The exhibition was principally confined to pears, apples and grapes. To particularise is needless, for every specimen on the tables was of the most *recherche* character, and exemplified to the practiced eye, in an especial manner, the advantages which, after a time, result from those exhibitions when they are conducted upon sound principles. We mean that the consequence of a continued series of exhibitions by a society that awards its premiums with impartiality, and upon competent adjudication, is certain to produce in a neighborhood a high standard of excellence, as that which alone will satisfy the public mind. Thus from habit the taste of all around is refined, and the public reap the benefit which naturally flows from this state of things. For when people are in the habit of seeing good fruit upon the exhibition tables, they soon require from growers that their marketable commodities of the same kind, should bear an appearance which indicates a relationship to these favored offsprings of Pomona. There was at the exhibition a full attendance of the members and friends of the society; indicating that there is no want of interest in the subject where the thing is well done. We hope the New-York Horticultural Society will next year progress with increased vigor, and continue with energy the work they have so well and satisfactorily begun. In the Massachusetts Society they have a good example, and evidence that they have only to persevere to succeed. We shall accord them our best support most willingly.

CHRYSANTHEMUMS.—How beautiful are the Chrysanthemums at this season. The Lilliputian varieties also, recently introduced, possess an interest which is peculiar to themselves. The best of this class, of different shades of color, are La Fiancee, Bijou, Bouton de Versailles, Bozard, Eliza Mielliez. Amongst the best varieties of the large Chrysanthemums that we have noticed this year, are Lycias, King of

Crimsons, Charlemagne, Malvina, Queen of England, and Reine des Bacchanale. All we have named are truly magnificent.

SEEDLING CAMILLIAS.—No information is more welcome to the really enthusiastic Floriculturist than that which tells him where to meet with something good that he cannot get elsewhere. Last April we paid a visit to Mr. BOLL's nursery, in 51st street, New-York, to see his Seedling Camellias, and as we have not unfrequently gone upon similar errands, without being very well satisfied with their results, we rather demurred at the long walk up Broadway. In this instance, however, we had no cause for regret. Many of his seedlings are good, and some of them decided acquisitions in color as well as shape. Our dollars always become restless in our pocket when we see a really good thing, as well as new, in the shape of a flower; and we consequently wished to get one or two of these seedlings. But so unlucky were we in our choice, that some we fixed upon were not to be had until this season. As soon as they are in bloom, we intend to renew our visit, and we doubt whether any one who follows our example will repent it. But we advise all to do one thing, namely, *leave their purse at home*, for whatever good resolutions they may form, they will otherwise assuredly come home with it lighter than they went.

RED SPIDER IN VINERIES.—The following is the mode adopted by one of the best cultivators of the day, to get rid of this pest of gardens. It is the system of Mons. Gresson, the head gardener of the forcing houses at Versailles.—Mix a pound of the flower of sulphur with an equal quantity of fresh slacked lime; when well mixed put them in an iron or glazed earthenware pot with five pints of water; boil it ten minutes, stirring it all the time; remove the pot from the fire, and when it has settled, about four pints of the clear liquid can be bottled for use. To use it, mix one part of this mixture with one hundred of water. With this diluted liquid, Mons. Gresson syringes his vines before they are in flower; again after the berries are

set and growing, and again a third time, should there be any signs of the malady.

SYNONYMS OF PEARS.—In your October number, you ask in an editorial note, "Why is it that the English and Belgian Pomologists do not accept our name of *Beurre d'Aremberg* for the pear that the French call *Glout Morcean*, and our *Orpheline d'Engheim*?" and you go on with some further remarks. There is, I think, some misconception or misplacement of words in your article, and if you will state the question anew, I will reply to it; as it is a matter that ought long ago to have been rectified by the party in error. Yours respectfully, WM. R. PRINCE.

Our correspondent has misunderstood the question in the letter we published from **ANDRÉ LEROY**, to be our own. There appears to have been a typographical omission in his question. It should read, "Why is it that the English and Belgian Pomologists do not accept our name of *Beurre d'Aremberg* for the pear that the first call *Glout Morcean*? And *Orpheline d'Engheim*, for the pear called by them the *Beurre d'Aremberg*?"

DAMSON CHEESE.—However much we may advocate fruit culture in our pages, we leave the cooking department to others; but there is no general rule without an exception. There are many ways to do many things, but there is only one way to make good Damson Cheese. Whence it took the name of cheese, we know not, unless it be from its firm, cheese-like texture, when well made—which it will be if the following receipt is adhered to:

Put the Damsons in a stone jar, which place in an oven or on a stove until the juice runs freely, the fruit is perfectly tender, and the stones separate from it. Remove the stones with a silver or wooden spoon; measure the pulp in a preserving pan and place it on the fire and boil, until the liquid is evaporated, and the fruit left dry. Whilst this is doing, have ready a quantity of white loaf sugar, allowing half a pound of sugar for every quart of pulp, as measured when put into the pan. Let this sugar be rolled fine, and then heated in the oven in a pan until it is so hot that the hand can not be kept on it. In this hot state, mix the sugar thoroughly with the dry pulp, also hot from the

fire. It will become very firm, and does not require to go on the fire again. Put it into jars or glasses whilst hot, and when cold, cover and put away.

FRUIT CATALOGUE OF THE AMERICAN POM. SOCIETY.—We have been favored, promptly, with the Transactions of the American Pomological Society, at its session in Philadelphia in September last. It makes a handsome pamphlet of 168 pages, and will be read with interest by fruit growers throughout the country. We copy from it the annexed catalogue of fruits, which are now placed on the Society's list:

Fruits worthy of general cultivation.

Apples.

American Sum'r Pearmain,
Baldwin,
Bullock's Pippin,
Dumers Winter Sweet.
Early Harvest,
Early Strawberry,
Fall Pippin,
Fameuse,
Summer Rose,
Swan,
Vandevere,
White Seek-no-Further,
White Apple, or Hays,
Winesap,
Hubbardston Nonsuch,
Large Yellow Bough,
Lady Apple,
Porter,
Red Astrachan,
Rhode Island Greening,
Roxbury Russet,
And for particular localities.
Canada Red,
Esopus Spitzenburg,
Newtown Pippin,
Northern Spy,
Yellow Belle Fleur.

Pears.

Ananas d'Ete,
Andrews,
Belle Lucrative or Fondante
d'Automne,
Beurre d'Anjou,
Beurre d'Aremberg,
Beurre Bosc,
Bloodgood,
Buffum,
Dearborn's Seedling,
Doyenne d'Ete,
Flemish Beauty,
Fulton,
Golden Beurre of Bilboa,
Louise Bonne de Jersey,
Madeleine,
Paradise d'Automne,
Rostiezer,
Seckel,
Tysou,
Urbaniste,
Uvedale's St. Germain, for
baking,
Vicar of Winkfield,
William's Bon Cretien or
Bartlett,
Winter Nelis,
And for particular localities.
Grey Doyenne,
White Doyenne.

Apricots.

Breda,
Large Early,
Moorpark.

Nectarines.

Downton,
Early Violet,
Elruge.

Peaches.

Bergen's Yellow,
Coolidge's Favorite,
Crawford's Late,
Early York, serrated,
Early York, large,
George the IVth,
Grosse Mignonne,
Morris White,
Old Mixon Free.
And for particular localities.
Heath Cing.

Plums.

Bleecker Gage,
Coe's Golden Drop,
Frost Gage,
Green Gage,
Jefferson,
Lawrence's Favorite,
Purple Gage,
Purple Favorite,
Washington,
And for particular localities.
Imperial Gage.

Cherries.

Belle Magnifique,
Black Eagle,
Black Tartarian,
Downer's Late,
Downton,
Elton,
Early Richmond, for cook'g,
Grafton or Bignone,
Knight's Early Black,
May Duke.

Under Glass.
 Black Hamburg,
 Black Prince,
 Black Frontignan,
 Chasselas de Fontainebleau,
 Grizzly Frontignan,

Grapes.
 White Frontignan,
 White Muscat of Alex'dria.
Open Culture.
 Catawba,
 Isabella.

Raspberries.
 Fastolf,
 Franconia,

Red Antwerp,
 Yellow Antwerp.

Strawberries.
 Boston Pine,
 Hovey's Seedling,

Jenney's Seedling,
 Large Early Searlet.

Currants.
 Black Naples,
 May's Victoria,
 Red Dutch,

White Dutch,
 White Grape.

Gooseberries.
 Crown Bob,
 Early Sulphur,
 Green Gage,
 Green Walnut,
 Red Champagne,

Houghton's Seedling,
 Iron-monger,
 Laurel,
 Warrington,
 Woodward's White Smith.

New varieties which promise well.

Apples.
 Autumn Bough,
 Hawley,
 Melon,

Mother,
 Northern Spy,
 Smoke House.

Pears.
 Brandywine,
 Brandy's St. Germain,
 Beurre Giffard,
 Chancellor,
 Doyenne Boussock,
 Doyenne Goubault,
 Duchesse d'Orleans,
 Duchesse de Berri,
 Diller,
 Jalouse de Fontenay Vendee,
 Kirtland,

Limon,
 Manning's Elizabeth,
 Nouveau Poiteau,
 Onondaga,
 Ott,
 Pratt,
 Paradise d'Automne,
 St. Michel Archange,
 Stevens' Genesee,
 Striped Madeleine,
 Van Assene.

Plums.
 McLaughlin,
 Prince's Yellow Gage,

Rivers' Favorite,
 St. Martin's Queche.

Cherries.
 Bigarreau Monstreuse,
 Bayay,
 Grapes—Diann.
 Raspberries—Kuevette's Giant.
 Strawberries—Burr's New Pine.

de Early Purple Guigne,
 Reine Hortense.

To our Volume.

Go little volume, with thy brothers join,
 Advise the world—nor deem thy mission small.
 Would that the hands that early traced
 Thy first born pages, had too, penned thy last!
 'Twas not to be. The GREAT OMNISCIENT MIND
 Who fixes, well for us, each age's weal,
 Recalled to Peace, the energies addressed
 Through many a year to Rural Beauty's Shrine.
 —Jealous that one whose hand had on her Banks,
 Oft drawn forth Beauties she knew not her own,
 Our glorious Hudson claimed his ebbing life,
 And hushed his last soft sigh in cradled sleep!
 Regret not, friends, the loss of one we loved;
 Remember that our loss is gain to him;
 And think more kindly on his favors past,
 Which Death has hallowed to sweet Memory's care.
 A Downing lived :—A Downing's dead!
 His country mourn's a loss she can't redeem,
 And Nature smiles, remem'ring that his life
 Was through her spent in Worship to her God.

VINES IN GRAPE HOUSES.—Sir: I beg to claim your indulgence, while I trouble you with a few questions, an answer to which, either yourself or some of your able correspondents, will perhaps, kindly furnish through the Horticulturist. I entered a situation near this city, on the 2nd of August last; I have under my care three grape houses—the houses have a lean-to roof, and the vines planted some in the house and some out; the greater part of the vines are foreign; some Sweet Waters planted three or four years ago, bore a few bunches—but every leaf on the vines dies, scorched very much; some young vines, also foreign, planted in the spring of 1851, were the most miserable things I ever saw, every leaf burned and scorched, and only made two or three feet of miserable poor wood. I have had vines under my care for twenty years in England, and never saw anything like this. I only arrived in this country last May, and consequently have not had any experience here. The border, I am told, is thoroughly drained and made of rotten manure, and light sandy peat; I am told by my predecessor, that the vines have been liberally supplied with water; I have no thermometer, but I am sure the heat must be above 100° often, and my impression is that the sun is too powerful for them; in this, my predecessor does not agree. I may say the Isabella and Catawba grapes, are in a flourishing state by the side of these vines; the vines have been pruned on the spur system. I should be glad to know of a *radical cure* for this. I should be glad to know if any of your correspondents have had any experience with canvass for a shade for foreign vines. The situation is near the lake shore; the sorts of foreign vines are Muscat, Black Hamburg, St. Albans, Frontignan, &c. I see no difference in the sorts. The vines are trained some on rafters and some on the back wall. I am, sir, your obedient servant, C. *Chicago, Ill.*

MR. DUNLAP'S NEW STORE IN NEW-YORK.—In passing up Broadway a few days since, we called in to see the new establishment Mr. Thos. Dunlap has opened opposite his former premises, and were agreeably surprised to find attached to his seed store, a well proportioned greenhouse, recently erected, into which a select collection of plants for winter and early bloom in the year, were just removed. The plants are

looking well, and the place altogether had an appearance of neatness and order well calculated to induce the residents of the upper part of the city who may call once to repeat their visits.

Answers to Correspondents.

HICKORY TREES FROM NUTS.—*A subscriber.* (Berks co., Pa.) The nuts, without being permitted to become dry, should be mixed with moist peat, covered with leaves, and in this condition be exposed to the winter frosts. If carefully cracked in spring, their germination and growth would be insured.

BONES FOR VINE BORDERS.—*L. B.*—(Oak Creek, Wis.) Bones, although highly useful, are not absolutely essential to a good vine border. When broken, they serve the two-fold purpose of assisting drainage, and promoting fertility. They are much more effective when ground, and still more so, if dissolved by sulphuric acid. They are chiefly valuable for their phosphate of lime, which may be also applied in the form of guano, which contains a large portion of the phosphate. The addition of a moderate quantity of lime, leached ashes, and gypsum, are useful. These, and the guano especially, should be well mixed with the earth, turf, and other materials. Stable manure should form the chief fertilizing ingredient in every vine border—we have known some excellent graperies where this constituted nearly all the manure.

CACTI.—*J. Johnson.* The tall varieties of Cacti should be grown in rich light compost.—The old system of starving them in lime rubbish, is quite exploded by good gardeners. They will live through the winter very well in any house from which frost is excluded. Give but little if any water in winter, and very sparingly in spring, until the bloom buds are visible. Then give them more, and while the buds are forming place them near the glass, so that they may have all the sun and light they can get.

WINTER BULBS.—*Jane.* You will find directions for the cultivation of winter bulbs, in an article on the Narcissus in our September number for this year.

IXIAS.—*Thomas M.* Ixias are from the Cape of Good Hope. They must be allowed to rest during several months. Withhold water from them as soon as you perceive the end of their leaves turn yellow. You need not re-pot them more than once in five or six years; they generally bloom better than when disturbed every year. Leaf and decayed vegetable mould with some white sand will grow them well.

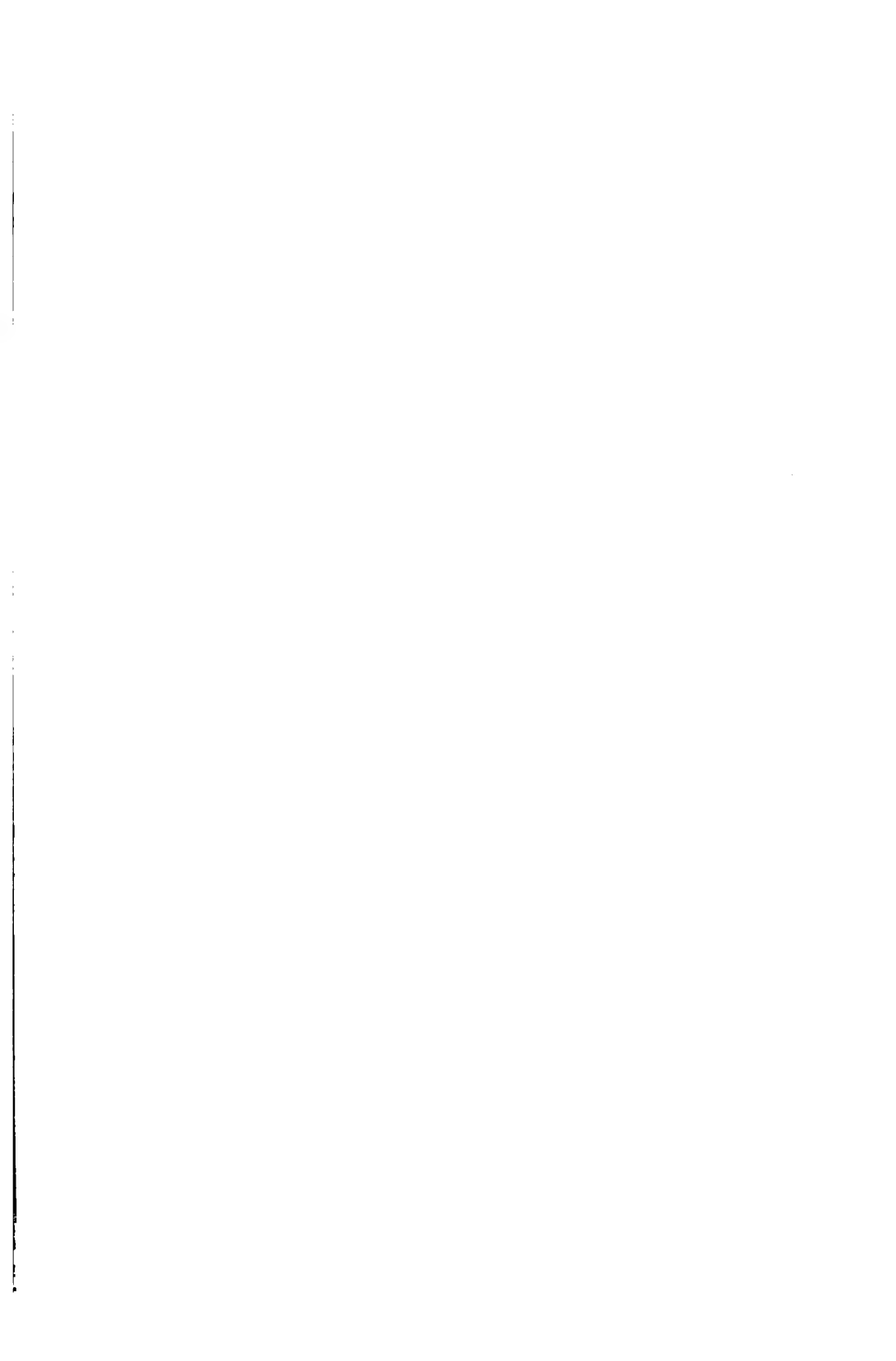
CORREAS.—*J. S.* Correa speciosa is the best taken altogether. Three parts black peat or vegetable mould, and one part good loam, not too stiff, and a little white sand is the best compost for them. Give good drainage.

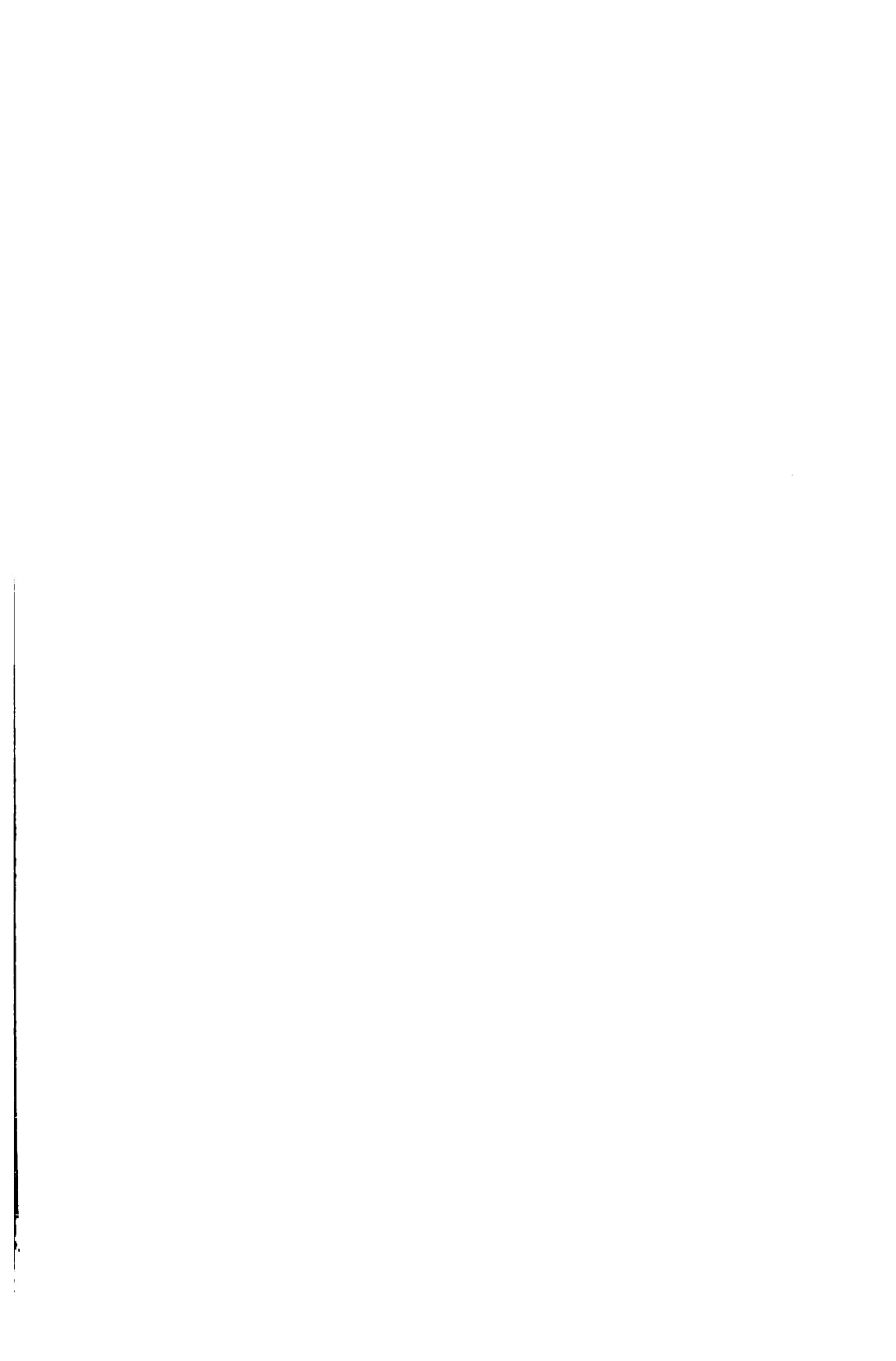
LILIUM LANCIFOLIUM.—*Edward Smith.*—You should let your pots of the Japan Lilies stand quite dry until the end of December. Then pot them, for they begin to grow at the root about that time. They do not require vegetable mould. They grow stronger and finer in good rich compost, half loam and half well rotted manure.

GERANIUMS.—*T. Roseson.* Those that are shy in breaking after being cut back, (like Orion,) should never be stopped until the pot is well filled with roots, and the plant in vigorous growth. Beck's Aurora is a fine flower in its best state; but it is very uncertain, and on that account scarcely worth growing; besides there are now better flowers nearly of the same character.

DAHLIAS.—*D. F.* From your remarks, we expect that when you take up your roots you injure them by pulling them out of the ground, when only half lifted by the spade. Never do that; let the top be first cut off near the ground, then *with the spade* raise them entirely out of the ground; but do not pull them.

MARTYNIA FRAGRANS.—*James.* This delightful scented plant, requires as much heat as you can give it when young, if you want to bloom it early in the summer. It will do well out in the open ground in the hot weather.







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